Self-Assessments

on Concept (1.3)

Self-Assessment 10 On Lesson 1

1 **(A) Cross out the odd word :**

1. Grasses – Algae – Sea stars – Trees. (....................)
2. Clam – Zooplankton – Algae – Sea urchin. (....................)
3. Sharks – Crocodiles – Snakes – Hawks. (....................)

(B) Give a reason for the following :

All food chains depend on sunlight.

....

2 **(A) Choose the correct answer :**

1. All marine food chains don't include ....
   a. algae. b. zooplankton.
   c. tigers. d. sharks.
2. Flooding which may destroy a desert ecosystem, is due to ....
   a. drought condition. b. decreasing producers.
   c. gentle rain. d. heavy rain.
3. If algae are completely removed from a marine ecosystem, ... will be negatively affected.
   a. clam only b. zooplankton only
   c. clam and zooplankton d. clam, zooplankton and sea urchin

(B) Study the following food chain, then complete the table below :

Algae → Clam → Sea star → Shark

The living organism	Its type
1. Algae	....
2.	Primary consumer.
3. Sea star	....
4. Shark	....

3 Form a food chain on land environment from the following living organisms :

(Deer – Shark – Grasses – Lion)

....

Self-Assessment 11 till Lesson 2

1 (A) Cross out the odd word :

1. Primary consumers – Decomposers – Secondary consumers – Top predators. (..................)
2. Fox – Clam – Rabbit – Eagle. (..................)
3. Seabird – Small fish – Tiger – Microorganisms. (..................)

(B) Give a reason for the following :

Predators cannot feed directly on plants.

....

2 (A) Correct the underlined words :

1. Energy transfers when a secondary consumer feed on a producer. (..................)
2. All nonliving things can make their own food. (..................)
3. Producers need the energy of moonlight to make photosynthesis process. (..................)

(B) What happens to ...?

The food resources of the seabirds when the seawater becomes cooler.

....

....

3 Study the following food web, then put (✓) or (✗) :

Grasses → Sheep → Lion

Grasses → Deer → Lion

1. Energy can transfer from the producer to the deer only. (   )
2. Both sheep and deer are primary consumers. (   )
3. Grasses are considered as producers because they cannot make their own food. (   )
4. The lion is considered as a secondary consumer and a top predator. (   )

Self-Assessment 12 till Lesson 3

1 **(A) Complete the following sentences using the words below :**

(producers – coral bleaching – plastic)

1. In .... , the color of coral reefs turns completely into white.
2. Marine living organisms cannot differentiate between real food and .... waste materials.
3. In marine food chains, microorganisms are considered as ....

(B) What happens to ... ?

The coral reefs when the seawater temperature rises.

....

2 **(A) Correct the underlined words :**

1. Plastics are healthy and smooth , so they cause harm to marine living organisms.
2. Due to rising of seawater temperature, coral reefs turn completely into green.
3. Marine living organisms cannot differentiate between water and plastics.

(B) Give a reason for the following :

It is better to recycle plastic waste materials than throwing them in water.

....

....

3 **Choose from the following living organisms to form a food chain in seawater :**

(Zooplankton – Shark – Algae – Tiger – Corals – parrotfish)

....

Self-Assessment 13 till Lesson 4

1 **(A) Put (✓) or (✗) :**

1. Removing plants at riverbanks, negatively impact the environment. (   )
2. Habitat restoration projects, include repairing all natural resources of an ecosystem. (   )
3. Riverbanks eroding may occur due to removing primary consumers away from an ecosystem. (   )

(B) What happens to ...?

An animal species if its habitat will not be restored to the natural state.

....

2 (A) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Corals	a. depend on grasses to get energy.
2. Seabirds	b. depend on deers to get energy.
3. Rabbits	c. depend on microorganisms indirectly to get energy.
	d. depend on algae indirectly to get energy.

1. .... 2. .... 3. ....

(B) Give a reason for the following :

Removing plants at riverbanks harms an ecosystem in many different ways.

....

....

3 Correct the underlined words :

1. <u>Microplastics</u> is a new way that people in Egypt coastal communities apply to decrease using of one-use plastic products. (.....................)
2. <u>Habitat loss</u> is the process of returning a habitat back to its natural state before harm was done. (.....................)
3. The place in which we can take care of coral until they grow up, is known as <u>hospital</u>. (.....................)

Model Exam 1





1 (A) Choose the correct answer : *(5 marks)*

1. All the following factors pollute the water, <u>except</u> ....
   a. plastic garbage. b. sunlight.
   c. animals wastes. d. humans wastes.

2. In a food chain, the energy transfers ....
   a. from a consumer to a producer. b. from a predator to a producer.
   c. from a predator to a prey. d. from a prey to a predator.

3. Seabirds build their nests ....
   a. on the water surface. b. deep down into the sea.
   c. on the top of mountain cliffs. d. deep down into the river.

4. As a result of coral reefs bleaching, corals will ....
   a. increase. b. enlarge. c. survive. d. die.

(B) What happens if ...?

The number of secondary consumers in an ecosystem decreases.

....

....

2 (A) Put (✓) or (✗) : *(5 marks)*

1. People can recycle plastic products instead of throwing them in the sea. (   )
2. Microorganisms that live in water increase when the water becomes warmer. (   )
3. Some marine organisms depend on coral reefs for food and shelter. (   )
4. Tigers are considered as top predators in marine food chains. (   )

(B) Give a reason for the following :

Coral bleaching happens when the water temperature rises.

....

....

3 **(A) Write the scientific term of each of the following :** *(5 marks)*

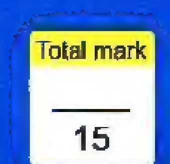
1. It is an area in the sea, where scientists take care of small pieces of coral until they grow up. (....................)
2. Small pieces of plastics in the size of rice grains and they cause harms to the coral reefs. (....................)
3. It is the number of organisms of one type of species living in an area. (....................)
4. It is harm that happens to the water due to human activity. (....................)

(B) Correct the underlined words :

1. Due to rising of water temperature, coral reefs turn completely into <u>green</u>. (....................)
2. If the number of <u>secondary</u> consumers increases, the amount of producers in this ecosystem will decrease. (....................)

Model Exam 2

on Concept (1.3)



1 (A) Put (✓) or (✗) : *(5 marks)*

1. If the climate change is suitable, the population of a species will decrease. (   )
2. Corals can make their own food by photosynthesis process. (   )
3. Overfishing is a human activity that can change the habitat in a marine ecosystem. (   )
4. It is better to keep natural resources healthy instead of applying restoration projects on them. (   )

(B) Give a reason for the following :

Change in the population of one species affects the population of other species.

....

....

---

2 (A) Choose the correct answer : *(5 marks)*

1. If clams are completely removed from a marine ecosystem, the survival of .... may be affected.
   a. sharks　　b. sea urchin
   c. tiggerfish　　d. sea stars

2. Habitat restoration projects allow scientists to .... that occur to an ecosystem.
   a. increase harms　　b. decrease harms
   c. keep harms　　d. increase damages

3. Any increase or decrease in the number of organisms of one type of species is known as ....
   a. a climate change.　　b. an ecosystem.
   c. a population change.　　d. adaptation.

4. When there is a gentle rain in a desert ecosystem, this ecosystem may be ....
   a. harmed.　　b. improved.　　c. destroyed.　　d. not changed.

(B) What happens to ...?

The coral reefs when the seawater temperature rises.

....

....

3 (A) Complete the following sentences using these words : *(5 marks)*

(microorganisms – small fish – preys – primary consumers)

1. Producers in the marine food chains, are ....
2. Small fish are considered as .... , when they eat the producers.
3. Seabirds feed on .... to get energy.
4. Predators of living organisms may be .... for other living organisms.

(B) Cross out the odd word :

1. Tiger – Rabbit – Shark – Crocodile. (....................)
2. Insects – Trees – Algae – Grasses. (....................)

Self-Assessments
on Concept (2.1)

Self-Assessment 14 On Lesson 1

1 (A) Correct the underlined words :

1. Sand is an example of <u>liquid</u> matter. (......................)
2. Ice is water in the <u>gas</u> state. (......................)
3. Water vapor is considered as an example of <u>solid</u> matter. (......................)

(B) What happens to ...?

The state of water when it is heated to a very high temperature.

....

2 (A) Put (✓) or (✗) :

1. A mass of matter is the space occupied by this matter. ( )
2. Any matter consists of tiny things that we cannot see with our eyes. ( )
3. A matter has two states. ( )

(B) Give a reason for the following :

Oil is a matter.

....

3 Classify the following words into solids, liquids and gases in the table below :

(Milk – Carbon dioxide – Sugar – Stone – Blood – Oxygen – Oil – Coal – Water vapor)

Solids	Liquids	Gases
....	....	....
....	....	....
....	....	....

Self-Assessment 15 till Lesson 2

1 (A) Cross out the odd word :

1. Air – Oxygen – Glass – Carbon dioxide. (......................)
2. Wood – Plastic – Glass – Air. (......................)
3. Oil – Milk – Water – Coin. (......................)

(B) Give a reason for the following :

Gasoline is a liquid matter.

....

2 (A) Correct the underlined words :

1. Particles of solid matter have a lot of spaces. (........................)
2. Matter is anything that has color and volume. (........................)
3. We can measure the mass of some matter using thermometer. (........................)

(B) What happens to ...?

The shape of ice if it changes into water.

....

3 Arrange the following pictures that show the three states of water according to :

(A) (B) (C)

1. Spaces between particles (Ascendingly).

....

2. Energy of particles (Descendingly).

....

Self-Assessment 16 till Lesson 3

1 (A) Correct the underlined words :

1. A matter consists of tiny states. (........................)
2. To see some particles of a matter, we have to use a measuring tape. (........................)
3. Particles of liquids are packed tightly. (........................)

(B) Give a reason for the following :

Normal microscope was invented.

....

2 **(A) Complete the following sentences :**

1. Particles of .... matter can slide over each other, so they take the shape of their containers.
2. Particles of .... matter can move very quickly in all directions.
3. Both shape and volume of a coin is .... as it is a solid substance.

(B) What happens to ... ?

The particles of air inside the balloon when you squeeze it.

....

....

3 **Choose from columns (B) & (C) what suit them in column (A) :**

(A)	(B)	(C)
1. Glass	a. has no definite shape or volume.	A. Its particles have no energy.
2. Water	b. has no definite volume and definite shape.	B. Its particles have low energy.
3. Air	c. has no definite shape and definite volume.	C. Its particles have medium energy.
	d. has definite shape and volume.	D. Its particles have high energy.

1. .... → .... 2. .... → .... 3. .... → ....

Self-Assessment 17 till Lesson 4

1 **(A) Put (✓) or (✗) :**

1. Models can help us see things that are too small or too big to observe. ( )
2. A group of students standing very closely together in a small area, this group may represent a model of a gas matter. ( )
3. The mass of an iron cube is the amount of space that it takes up. ( )

(B) Give a reason for the following :

A golden ring is considered a matter.

....

2 **(A) Correct the underlined words :**

1. Particles of liquids are arranged in a regular pattern. (..................)
2. Light is a form of matter. (..................)
3. A model is a copy that is different from a real thing. (..................)

(B) What happens if ...?

Water is placed in some containers that have different shapes.

....

3 **Classify the following materials according to the arrangement of particles into regular pattern or random arrangement in the table below :**

(wood – water – plastic – oxygen – oil – carbon dioxide)

Regular pattern	Random arrangement
....	....
....	....
....	....
....	....

Self-Assessment 18 till Lesson 5

1 **(A) Put (✓) or (✗) :**

1. A rock is a matter as it has mass and volume. ( )
2. Models are designed to let things be studied more hard. ( )
3. Particles of a ruler are packed very close to each other. ( )

(B) Give a reason for the following :

Water vapor has no definite shape or volume.

....

2 **(A) Correct the underlined words :**

1. The amount of space occupied by a substance is related to its mass. (..................)
2. The shape of liquids doesn't change whatever the container they are put in. (..................)
3. Particles of gases have a regular pattern. (..................)

(B) What happens to ...?

The speed of particles of water when it is heated.

....

3 Look at the following picture that shows the water cycle in nature, then complete the following sentences :



1. Label (1) refers to a matter in .... state.
2. Label (2) refers to a matter in .... state.
3. Label (3) refers to a matter in .... state.



Model Exam
on Concepts (2.1)



1 **(A) Complete the following sentences :** *(5 marks)*

1. Matter is made up of tiny ....
2. Earth is a planet in the .... system.
3. To describe the particles of a matter in .... state by modeling balls, we should put the balls packed together.
4. Particles of .... matter can slide over each other.

(B) Give a reason for the following :

Salt is a solid matter.

....

2 **(A) Choose the correct answer :** *(5 marks)*

1. All of these substances are liquids, <u>except</u> ....
   a. oil. b. milk. c. stone. d. vinegar.
2. Gases have .... shape and .... volume.
   a. definite – definite b. no definite – no definite
   c. definite – no definite d. no definite – definite
3. The movement of particles of water are slower than that of ....
   a. wood. b. plastic. c. air. d. gold.
4. We can use a model to study very large things such as ....
   a. solar system. b. germs. c. microbes. d. viruses.

(B) What happens to ...?

The arrangement of particles of water after its freezing.

....

3 **(A) Put (✓) or (✗) :** *(5 marks)*

1. Gasoline takes the shape of its container. ( )
2. All matter have only one state. ( )
3. Particles of water can move more freely than the particles of water vapor. ( )
4. Particles of an aluminium spoon are similar to particles of a golden ring ( )

(B) Cross out the odd word :

1. Coal – Carbon dioxide – Oxygen – Air. (..................)
2. Oil – Milk – Water – Wood. (..................)

Model Exam 1 on Concept (2.1)



1 (A) Complete the following sentences : *(5 marks)*

1. Iron and gold are examples of .... state of matter.
2. Matter that takes the shape of its container, but its volume cannot be changed is ....
3. Any matter is made up of tiny .... that we cannot see with our eyes.
4. Scientists cannot use the .... microscope to see the components of one blood cell.

(B) Give a reason for :

Oil has different shapes when it is placed in some containers that have different shapes.

....

....

2 (A) Put (✓) or (X) . *(5 marks)*

1. We can understand things that we cannot easily see with our eyes by using models. (   )
2. Steam of boiling water is considered the gas state of water. (   )
3. Matter never changes from one form into another. (   )
4. Light and sound are forms of matter. (   )

(B) Cross out the odd word :

1. Oil – Milk – Water – Wood. (......................)
2. Plastic – Vinegar – Iron – Aluminium. (......................)

3 (A) Write the scientific term of each of the following : *(5 marks)*

1. The tool used to measure the length of a wall. (......................)
2. The building unit of matter. (......................)
3. A device used to examine objects that are too small to be seen with the naked eye. (......................)
4. The state of water after its heating for high temperatures. (......................)

(B) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Carbon dioxide	a. is a solid matter.
2. Sand	b. is a liquid matter.
	c. is a gas matter.

1. .... 2. ....

Model Exam 2

on Concept (2.1)



1 (A) Choose the correct answer : *(5 marks)*

1. .... and .... are examples of solids.
   a. Chair – ice b. Juice – ice
   c. Ruler – steam d. Bott e – milk
2. The amount of space that a matter takes up is called . ...
   a. volume. b. mass.
   c. weight. d. area.
3. One of the substances that doesn't take the shape of its container is
   a. oil. b. coin.
   c. gasoline. d. water.
4. Particles of .... vibrate around their place.
   a. glass b. air
   c. oxygen d. water

(B) What happens to ...?

The size of a balloon when you blow it up.

....

....

2 (A) Complete the following sentences : *(5 marks)*

1. Particles of . ... matter are very close to each other.
2. Particles of . ... matter can slide over each other, so they take the . ... of their containers.
3. A model of a germ helps us see its shape without using a ... ... which is used to magnify tiny objects.
4. When we leave a cup of jucice in freezer, it changes from liquid state into .... state.

(B) Give a reason for :

Scientists make models of germs.

....

....

3 (A) Write the scientific term of each of the following : *(5 marks)*

1. A device used to examine one tiny particle such as a blood cell. (.....................)
2. A copy that is similar to a real thing which we cannot observe with our eyes. (....... ....)
3. The state of water after its freezing. (....... ....)
4. The state of matter that has a lot of spaces between its particles. (. ... .)

(B) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Milk	a. Its particles are packed tightly.
2. Air	b. Its particles have medium energy.
	c. Its particles move very freely.

1. ... ... 2. . ...

Unit 1 Concept 3

Changes in Food Webs

The energy in an ecosystem remains as it is

- Some of the energy transfer among living organisms when they feed on each other.
- Most of the energy are recycled back to the ecosystem by decomposers.

In any ecosystem:

If producers disappear,	• Primary consumers will die quickly. • Secondary consumers will migrate or die.
If the number of one species of organisms increases too much,	• The food resources will run out.
If there are many top predators in the food web,	• The number of other consumers will decrease.

In the desert ecosystem:

Gentle Rain	• Rainwater helps producers grow. • Consumers will feed on producers.	• The desert ecosystem might be improved.
Heavy Rain	• Heavy rain leads to floods, which destroy the ecosystem.	• The desert ecosystem might be harmed.
Drought	• Producers will die. • Consumers will migrate or die.	• The desert ecosystem might collapse

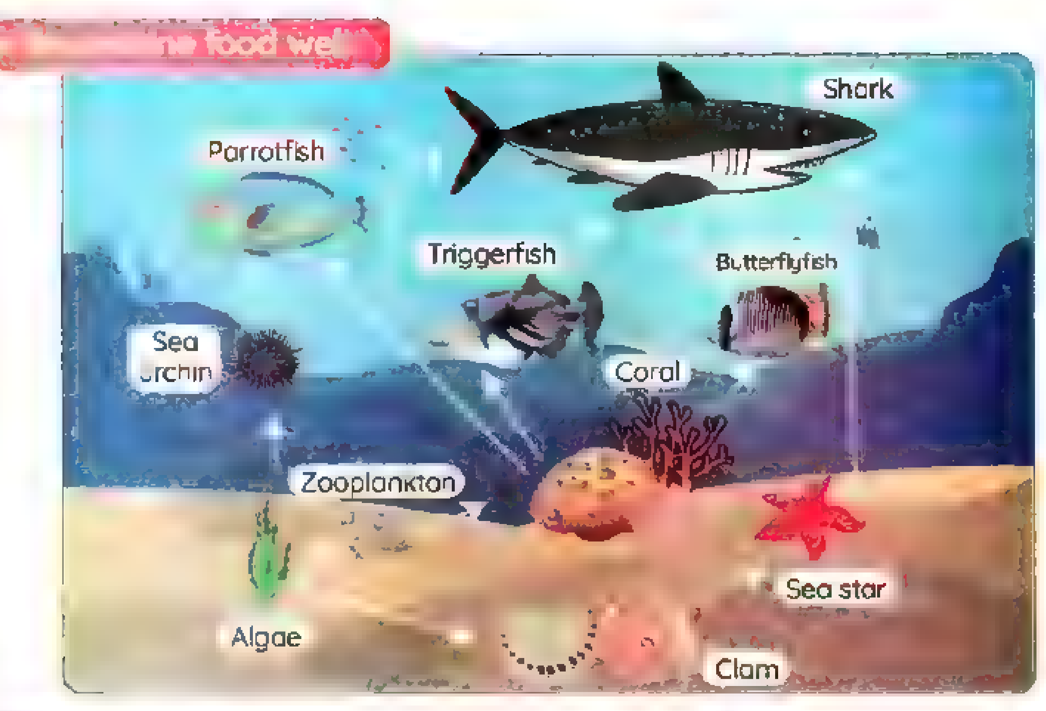
[illegible]

Overfishing	• A human activity that leads to a decrease in the number of fish.
Water Pollution	• A human activity in which humans throw waste materials in the water • Pollution: It's the harm that happens to air, water, or soil by substances that harm living organisms.

How can Palau Island protect the marine environment?

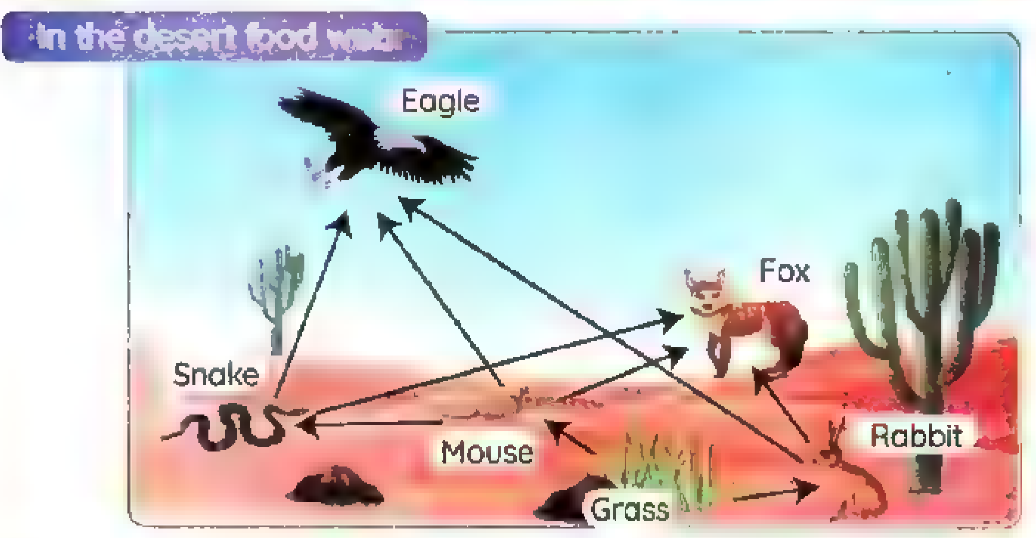
1. Palau manages land activities to control the quality of the marine environment
2. Palau prevents fishers from overfishing in coral reef regions.

[illegible] food web



- [illegible] are producers that produce their own food.
- [illegible], [illegible], and sea urchins are primary consumers.
- The [illegible] feeds on the clam and is eaten by sharks.
- The parrotfish feeds on sea urchins or corals.
- Butterflyfish and triggerfish feed on corals.
- The [illegible] is a top predator that eats butterflyfish, parrotfish, triggerfish and sea stars.

In the desert food web



- [illegible] is the producer that produces their own food.
- [illegible] and [illegible] are primary consumers that feed on producers.
- Hawks and foxes are top predators.

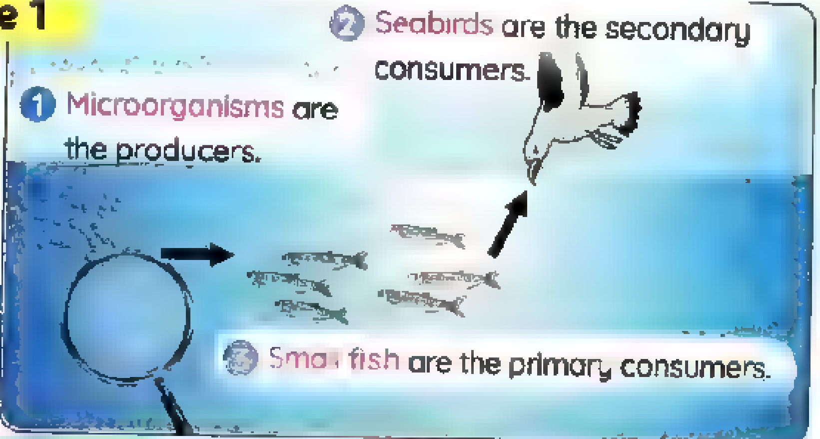
Effect of Climate on Population

The climate changes affect the population of a species, as follows:

1. If they were suitable, the population of species would crease.
2. If they were unsuitable, the population of species would decrease because organisms may die or migrate.

Population	It is the number of organisms of one type of species in an area.
Population change	It is the increase or decrease in the number of one species in any area.

Example 1



1 Microorganisms:

- Microorganisms are the producers because they can make their own food.
- They are found in cold water habitats because they need cold water to survive.

2 Small fish

- Small fish are primary consumers that feed on microorganisms floating on the water surface.

3

- Seabirds build their nests on the top of mountain cliffs.
- Seabirds dive down the sea to feed on the small fish.

What will happen if water becomes warm?

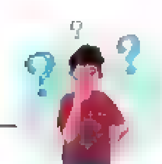
will move towards cooler areas.	will also move to new habitats.	will have no food, so some may find new habitats, while the others may die.



Example 2

- Coral reefs are from the most diverse and valuable ecosystems on Earth.
- Importance of coral reefs:

1. Coral reefs provide food and shelter for many marine organisms.
2. Coral reefs are also important for tourism.



How does coral bleaching happen?

When the water becomes too warm:

1. Corals reefs will get rid of the algae living in their tissues.
2. This causes the color of the coral reefs to turn completely white.
3. Bleaching events stress corals, so they do not survive.

Effect of Plastic Pollution

- Plastic is very dangerous because it is not nutritious and could be sharp or toxic.
- Some marine organisms cannot know the difference between real food and plastic, such as whales, turtles, seabirds, and fish.

Examples



Turtles eat a lot of plastics, thinking that they are jellyfish.



Corals filter the seawater to get their food, so they ingest microplastics.

- **Microplastics:**
  They are small plastic pieces that are even smaller than a grain of rice.

- **How they are formed:**
  Plastic products get broken down into smaller pieces by the effect of the Sun.

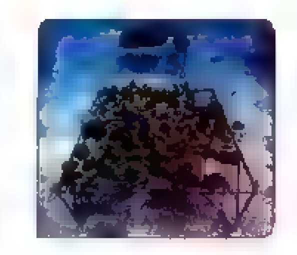
Habitat restoration • It is the process of returning a habitat to its natural state before harm was done.

Example:

Coral reefs rehabilitation project in Arabian Gulf

1. Scientists harvest small parts of coral species.
2. Scientists move these small parts to a nursery.
3. Healthy coral reefs can then grow and reproduce.
4. They're moved back to the reefs where they were dying.

Nursery • It is an area in the ocean where scientists take care of small pieces of corals until they grow and are moved back to the reefs where they were dying.



Zero plastics • A way adopted by coastal communities in Egypt to decrease plastic pollution by limiting single-use plastic on land.

Some ways to reduce plastic pollution:

- Using less plastic
- Stop throwing plastic into the water
- Recycling plastic waste

Unit 2 Concept 1

Matter in the World Around Us

Matter

- Matter is anything that has mass and volume (takes up space).
- Matter can exist in three states: solid, liquid, and gas.
- All matter is made up of tiny, identical moving particles.
- Light, sound, and heat are not matter, but they are forms of energy.

Measuring Tools

Tape Measure	Spring Scale	Measuring Cup
It is used to measure length.	It is used to measure weight.	It is used to measure volume.

Thermometer	Electron Microscope
It is used to measure temperature.	It is used to see individual particles.

States of Matter

P.O.C	Solids	Liquids	Gases
Shape	• Definite (fixed) • Keep their shape.	• Indefinite shape • Take the shape of the container • Can be poured	• Indefinite shape • Fill their container and take its shape.
Volume	• Definite (fixed)	• Definite (fixed)	• Indefinite
Spaces between particles	• Very close • Are held together (packed tightly).	• Have more space • Are held together more loosely.	• Have a lot of space • Are not held together
Energy of particles	• Less energy	• More energy	• A lot of energy
Motion of particles	• Move only a little bit. (move around their place) (vibrate)	• Move more freely. • Move faster than solids. • Can slide over each other.	• Move very freely. • Move very quickly.
Arrangement of particles	• Regular (organized) • Packed in a neat, ordered arrangement.	• Are not well organized.	• Have random arrangements. • Are not well organized at all.

Model • It is a copy that is similar to the real thing

Importance of models

[1] Models are a great way to see many things at the right size (not the real size)

Models represent very big things in a smaller size, such as:	Models represent very tiny things in a bigger size, such as:
Globe model • It is a model of Earth (whole world)	Germs model • To see the shapes of germs. • To see different parts that help germs spread from a person to another.
Solar system model • To compare planets.	

[2] Models can help us understand how things work.

Volcano model It is a model of a volcano that shows how ooze liquid comes out during an eruption.

Unit 1 Concept 3

Pollution	It's the harms that happen to air, water, or soil by substances that harm living organisms.
Population	It is the number of organisms of one type of species living in an area.
Population change	It is the increase or decrease in the number of one species in an area.
Top predators	They are consumers that exist at the top of food chains.
Microorganisms	They are producers in the marine food web.
Coral reefs	They are the most diverse and valuable ecosystems on Earth.
Coral bleaching	It happens when the temperature of water rises, and the color of coral reefs turns to white.
Microplastics	They're small pieces of plastic (smaller than a grain of rice) that are formed due to the effect of the Sun.
Habitat restoration	It is the process of returning a habitat to its natural state before any harm was done.
Nursery	It's an area in the ocean, where scientists take care of small pieces of corals until they grow up and can be moved back to the reefs where they were dying.
Zero plastics	It is a new way of life adopted in Egypt, in coastal communication near coral reefs by limiting single-use plastic on land.

Unit 2 Concept 1

Matter	It is anything that has mass and takes up space.
Solid	It is a state of matter that has a definite volume and shape.
Liquid	It is a state of matter that has a definite volume, but it doesn't have a definite shape.
Gas	It is a state of matter that has no definite volume or shape.
Model	It is a copy that is similar to the real thing.
Globe	It is a model that shows us the shape of Earth.
Solar system model	It is a model that helps us see all planets and compare between them.
Volcano model	It is a model that shows us the shape of a volcano.

Unit 1 Concept 3

1. A healthy habitat is very important for all living organisms.
   - Because it provides organisms with food, water and shelter.
2. Gentle rains benefit the desert ecosystem.
   - Because gentle rains help producers to grow, so the desert ecosystem is improved.
3. Heavy rains harm the ecosystem.
   - Because heavy rains lead to floods, so the desert ecosystem is harmed.
4. Microplastics have a bad effect on corals.
   - Corals filter the seawater to get food; so they ingest microplastics, which are toxic.
5. Plastics are so harmful for marine ecosystems.
   - Because plastics are toxic, sharp and not nutritious.
6. The nursery plays important roles in the recovery of coral reefs.
   - Because in a nursery, the small pieces of corals can grow healthy and reproduce.
7. Coral reefs are important for marine organisms and humans.
   - Coral reefs provide food and shelter for marine organisms.
   - Coral reefs are important for tourism (fishing or diving).

Unit 2 Concept 1

1. Air is matter.
   - Because air has mass and takes up space.
2. Wood is a solid matter.
   - Because wood has a definite shape and volume.
3. Oil is a liquid matter.
   - Because it has a definite volume, but no definite shape.
4. Steam is a gaseous matter.
   - Because it has no definite shape or volume.
5. Wood has a definite shape and volume.
   - Because wood is a solid matter; its particles are very close to each other (packed tightly), and they move only a little bit.
6. Air has no definite shape or volume.
   - Because the particles inside air have a lot of space between them and they move very freely.
7. A wooden cube keeps its shape when we change its position.
   - Because its particles are very close to each other (packed tightly and held together).
8. Milk takes the shape of the container.
   - Because milk is a liquid that has no definite shape.
9. Gases can escape into space.
   - Because gas has no definite shape or volume and its particles are not held together; they move very quickly.
10. When you blow a balloon, the air takes its shape.
    - Because air is a gas that has no definite shape or volume.
11. A chef put vegetables in a freezer.
    - To freeze them and to keep them fresh for a longer time.
12. Models have an important role in learning.
    - Because models help us see things in the right size and help us know how things work.

Unit 1 Concept 3

1. The small lakes are exposed to extreme hot climate?
   - The water in the lake will evaporate and the lake may completely disappear.
2. There are many top predators in a food web?
   - Ecosystems get harmed because predators will eat all the prey.
3. Gentle rains fall on the desert?
   - Grass will grow healthy and the ecosystem is improved.
4. Heavy rains fall on the desert?
   - Grass will die and the ecosystem is harmed.
5. The grass is removed from an ecosystem?
   - Primary consumers that feed on plants will die quickly.
6. The number of one species increases a lot (concerning the food resources)?
   - Food resources will disappear and consumers will not find enough food, so they will die.
7. The number of secondary consumers decreases in an ecosystem?
   - The number of primary consumers increases.
8. When the temperature of water containing microorganisms increases?
   - Microorganisms will move away to cooler water.
9. The water temperature rises (concerning the coral reefs)?
   - Coral bleaching happens and the coral reefs color turns to white.
10. The amount of plastics in water increases?
    - Marine organisms will be harmed because plastic is toxic and sharp
11. You add a road in the forest for moving cars?
    - It causes habitat loss for some living organisms.

Unit 2 Concept 1

1 Ice cubes are exposed to extreme heat?
- The ice will melt (changes from the solid state to the liquid state).

2 The water is boiling for a long time?
- Water will evaporate (changes from the liquid state to the gaseous state).

3 You leave a cup of milk in the freezer?
- It changes from the liquid state into the solid state.

4 Water is poured into a cup?
- Water will take the shape of the cup.

5 A liquid changes into a gas (considering the speed of the particles)?
- The speed of the particles increases.

6 We put the same amount of water in three different containers?
- The shape of water changes according to the shape of each container.

7 Water changes into ice (according to the particles)?
- The particles move slower and get closer to each other.

8 The particles of an ice is exposed to the Sun (according to the speed of the particles)?
- The particles move faster and move away from each other.

9 You blow a balloon up (according to its size)?
- The size of the balloon increases.

Revision

Concept 1.3
Changes in Food Webs

1 Choose the correct answer:

1. The process that happens to all dead organisms is known as ....
   a. respiration b. photosynthesis
   c. digestion d. decomposition

2. All the following organisms are considered producers, except ....
   a. hawks b. algae
   c. green plants d. marine microorganisms

3. All the following destroy the ecosystem, except ....
   a. gentle rain b. heavy rain
   c. drought d. pollution

4. If the grass is removed from an ecosystem, ... will die first.
   a. producers b. primary consumers
   c. secondary consumers d. decomposers

5. Energy could be recycled back into the ecosystem by the ....
   a. predators b. prey
   c. consumers d. decomposers

6. Corals get harmed when ....
   a. water becomes too warm b. they ingest microplastics
   c. fish take them as shelter d. a and b

7. The food chain describes the process by which .... are transferred among living organisms in an ecosystem.
   a. consumers b. decomposers
   c. producers d. energies

8. If the climate is suitable, the population of a species will ....
   a. remain constant b. become zero
   c. decrease d. increase

9 Which of the following human activities harm marine ecosystems?

a. Overfishing
b. Throwing wastes in water
c. Climate change
d. All the previous answers

10 All the following examples represent human bad activities, except ....

a. overfishing
b. pollution
c. floods
d. cutting trees

11 .... are considered top predators.

a. Tigers
b. Rabbits
c. Frogs
d. a and c

12 Algae in coral reefs provide food for .... directly.

a. primary consumers
b. secondary consumers
c. producers
d. top predators

13 In any food chain, the symbol (→) represents the transfer of ....

a. pollution
b. force
c. energy
d. motion

14 As the result of pollution in an ecosystem, the number of living organisms ....

a. decreases
b. increases
c. doesn't change
d. is doubled

15 .... live on the top of mountain cliffs and feed on small fish.

a. Turtles
b. Corals
c. Algae
d. Seabirds

16 All the following cause habitat loss, except ....

a. adding roads
b. recycling plastic
c. overfishing
d. throwing waste in water

17 The main source of energy on Earth is ....

a. the Sun
b. humans
c. decomposers
d. consumers

2 Complete the following sentences using the words between the brackets:

1. The marine food web starts with .... (algae – parrotfish)
2. Heavy rains may .... the desert ecosystem. (improve – destroy)
3. Rabbits die quickly when .... disappear(s) from the ecosystem. (hawks – grass)
4. Seabirds feed on small fish; they build their nests .... (in water – on the top of mountain cliffs)
5. .... have bad effect on the marine life. (Plastics – Coral reefs)
6. Coral reefs .... the seawater to get their food. (filter – pollute)
7. When coral bleaching happens, corals will .... (die – grow healthy)
8. The water of a lake .... during extreme hot climate. (increases – decreases)
9. Habitat restoration projects .... the ecosystem. (benefit – harm)
10. Pollution harms the ecosystem as the number of living organisms .... (decreases – increases)
11. .... can make their own food. (Fish – Microorganisms)
12. Gentle rain .... the desert ecosystem. (harms – improves)
13. The .... of water temperature causes the migration of microorganisms to other habitats. (increase – decrease)

3 Write the scientific term:

1. They are consumers that exist at the top of food chains.
2. They're living organisms that recycle the energy into the ecosystem.
3. They are consumers that feed on secondary consumers.
4. It's a group of interconnected food chains.
5. It is an area in the ocean where scientists take care of small pieces of corals until they grow up.

6 They're flying living organisms that build their nests on the top of mountain cliffs and feed on small fish

7 It is the number of organisms of one type of species living in an area.

8 It's the increase or decrease in the number of species of living organisms in an environment.

9 A human activity that affects marine food webs and makes the number of fish decrease.

10 They're small pieces of plastics in the size of rice grains.

11 The process of returning a habitat back to its natural state.

12 They're small organisms that live in cold and are considered producers in the marine food web.

13 When water temperature rises up, the coral reef turns completely into white.

4 Put (✓) or (✗):

1 Corals and sea urchins are examples of top predators in the marine ecosystem. ( )

2 Seabirds feed on small fish to get energy. ( )

3 A healthy marine habitat provides living organisms with food and shelter. ( )

4 People and engineers must help scientists in restoration ecology. ( )

5 When water temperature decreases, coral bleaching happens. ( )

6 If coral reefs are destroyed, many marine food chains will be destroyed. ( )

7 Microorganisms are producers in some marine food chains. ( )

8 Habitat loss may cause extinction of any species of animals. ( )

9 Consumers may migrate if the producers were removed from the ecosystem. ( )

10 A desert food chain doesn't contain any type of fish ( )

11. If organisms disappear in the ecosystem, this may lead to the destruction of the ecosystem. ( )
12. Top predators are consumers that exist at the top of food chains. ( )
13. Energy transfers from consumers to producers. ( )
14. Heavy rain harms the desert ecosystem. ( )
15. Coral reefs are considered producers. ( )
16. Plastic pollution harms the marine environment. ( )

5 Correct the underlined words:

1. Using wooden forks and cloth grocery bags increase the plastic pollution.
2. Gentle rain causes floods and damages the desert ecosystem
3. Plastic is healthy and smooth, so it causes harm to the marine living organisms.
4. Human is considered a producer.
5. Algae are producers in the desert ecosystems.

6 Give reasons for:

1. A healthy habitat is very important for all living organisms.
2. Gentle rains create a healthy ecosystem.
3. Microplastics have bad effects on corals.
4. Heavy rains harm the ecosystem.
5. Plastics are so harmful for marine ecosystems.
6. The nursery plays an important role in the recovery of coral reefs.
7. Coral reefs are important for marine organisms and humans

7 What happens if:

1. The water temperatures rises (concerning coral reefs)?
2. The temperature of water containing microorganisms increases?
3. The number of one species increases a lot (concerning food resources)?
4. The small lakes are exposed to extreme hot climate?

5. The amount of plastics in water rises?

6. The coral reefs are bleached?

7. Seawater becomes warm (concerning microorganisms)?

8. Sunlight falls on the plastic waste in an ocean?

9. Heavy rains fall on the desert?

10. The grass is removed from an ecosystem?

8 Complete the following sentences using the words between the brackets:

1. (flooding – extinction – consumers – decomposers)

a. Fungi and bacteria are two types of ....

b. Habitat loss is one of the main causes of ....

c. In food chains, energy transfers from producers to ....

d. Heavy rain causes .... which destroys the desert ecosystems.

2. (ecosystem – increases – nursery – decreases)

a. When the number of secondary consumers decreases, the number of primary consumers .... and the amount of producers ....

b. An .... is an area that provides food, water, and shelter to all living organisms that live there.

c. A .... is the area in the ocean where the small pieces of corals are nurtured.

3. (producers – Energy – shelter – primary consumers)

a. .... transfers between animals in a food web to help them do their activities and survive.

b. Marine microorganisms are ....

c. Secondary consumers can eat ....

d. Coral reefs provide marine organisms with ....

4 (sea turtles – coral reefs – small fish – microorganisms)

a. Seabirds feed on ....

b. Some marine animals cannot differentiate between food and plastic, such as ....

c. The .... are from the most diverse ecosystems.

d. When water becomes warm, ... will move to cooler water.

5 (energy – pollution – Seabirds – coral bleaching)

a. When water temperatures rises, ... happens.

b. Throwing plastic waste into a river causes water ....

c. When a predator feeds on prey, the predator gets .... from the prey.

d. .... dive deep down into the sea to feed on small fish

6 (Microplastics – cold – Pollution – die – warm)

a. Microorganisms live in .... water.

b. If the grass was removed from the ecosystem, primary consumers that feed on plants will ....

c. .... is the harm that happens to air, soil, and water due to human bad activities.

d. .... and .... water harm the coral reefs.

7 (Sun – floods – Small fish – producers – tertiary consumers)

a. Heavy rain in the desert lead to .... which harm the ecosystem.

b. .... feed on microorganisms floating on the surface of the sea.

c. Microorganisms are considered ....

d. Microplastics are formed when plastic is broken down by the ....

e. Secondary consumers are considered prey for ....



Choose from column (A) what suits it in column (B):



Column (A)

1. Microorganisms
2. Population Change
3. Microplastics

Column (B)

a. means the increase or decrease in the number of one species in any area.
b. are small plastic pieces that are even smaller than a grain of rice.
c. are producers in the marine food web.

1 .... 2 .... 3 ....

B

Column (A)

1. Habitat
2. Nursery
3. Habitat loss

Column (B)

a. is one of the main causes of extinction.
b. Is the environment that the living organism lives in.
c. is an area in the ocean where the small pieces of corals are nurtured.

1 .... 2 .... 3 ....



Column (A)

1. Overfishing
2. Gentle rain in the desert
3. Heavy rain in the desert

Column (B)

a. makes the desert ecosystem get better.
b. leads to floods.
c. may destroy the marine ecosystem.

1 .... 2 .... 3 ....



Column (A)

1. Coral bleaching
2. Seabirds
3. Microorganisms
4. Clams

Column (B)

a. can make their own food.
b. means the coral turns into white.
c. are primary consumers.
d. dive to search for food.

1 ....  2 ....  3 ....  4 ....



10 Answer the following questions:

1. What are the reasons of losing a habitat?

2. Mention one of the human activities that affect the marine environment.

3. Form food chains from the following living organisms:

   a. Rabbit – hawk – snake – green plant

   b. Parrotfish – algae – shark – coral

   c. Sea star – algae – shark – clam

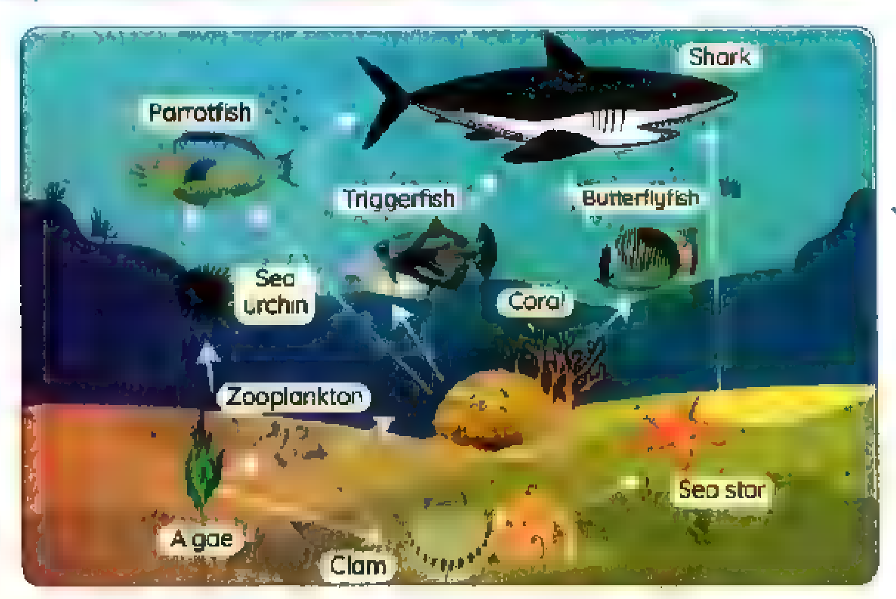
   d. Human – grass – chicken

   e. Snake – carrot – hawk – rabbit – fungi

   f. Duck – grass – fox – bacteria

   g. Giraffe – lion – fungi – acacia tree

4. Study the following figure, then answer the questions:



   a. This figure represents a .... ecosystem.

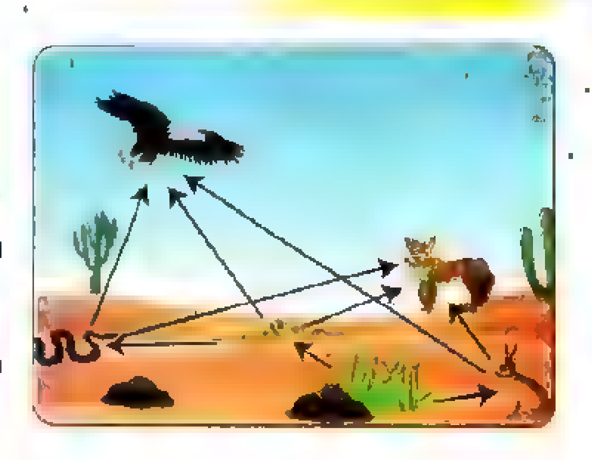
   b. .... are considered producers.

   c. .... can feed on seaurchins or corals.

   d. .... and .... feed on algae.

   e. .... is the top predator.

5 Study the opposite figure, then answer the questions:

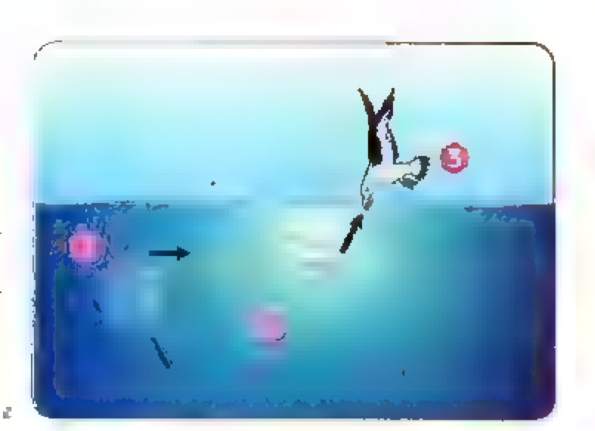


a. This figure represent a .... (food web – food chain)

b. .... harms this ecosystem. (Gentle rain – Heavy rain)

c. The .... is considered a top predator. (mouse – eagle)

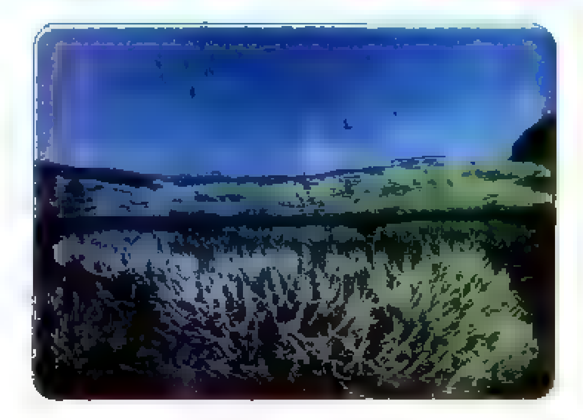
6 Study the opposite figure, then choose the correct answer:



a. This food chain represents a .... (marine food chain – desert food chain)

b. .... are considered producers of this ecosystem. (Algae – Microorganisms)

7 Study the following figure, then answer the questions:



a. This figure represents ....

b. It happens when the temperature of water ....

Revision

Concept 2.1
Matter in the World Around Us

1 Choose the correct answer:

1. .... is an example of gaseous matter.
   a. Oil   b. Air   c. Wood   d. Milk
2. The movement of particles of water is slower than those of ....
   a. wood   b. glass   c. plastic   d. oxygen
3. Which of the following matter has no definite volume or shape?
   a. Ice   b. Water   c. Oil   d. Oxygen
4. A .... is used to measure the weight of objects.
   a. measuring cup   b. thermometer
   c. meter   d. spring scale
5. How are solids unique from other forms of matter?
   a. Solids take the shape of any container.
   b. Solids have a definite size and shape
   c. Solids can be poured.
   d. Solids fill whatever container they are put in.
6. All matter is made of ....
   a. molecules   b. proteins   c. cells   d. atoms
7. Matter is ....
   a. anything that has mass only
   b. anything that has mass and takes up space
   c. only water in different states   d. only solids
8. Ice is an example of the .... state of water.
   a. solid   b. gaseous   c. liquid   d. a & b
9. .... has a definite volume and no definite shape.
   a. Air   b. Ice   c. Water   d. Wood
10. We can measure the temperature using a ....
    a. thermometer   b. scale
    c. meter stick   d. measuring tape

11 All the following examples represent solid states, except ....

a. oil b. books c. wood d. rocks

12 Water takes the .... of its container.

a. volume b. mass c. color d. shape

13 Which matter has a definite shape and a definite volume?

a. Water b. Ice c. Oil d. Air

14 Particles of .... vibrate around their places.

a. oxygen b. wood c. water d. vinegar

15 All of these substances are gases, except ....

a. water vapor b. oxygen c. air d. stone

16 An example of liquid is ....

a. vinegar b. rock c. pencil d. oxygen

17 Water can be found in a gaseous state in the form of ....

a. ice b. water vapor

c. oxygen d. frozen water

18 The .... matter can be poured in any container.

a. liquid b. gaseous c. solid d. b and c

19 If ice is transferred from a container to another, its volume ....

a. increases b. doesn't change

c. decreases to its half d. doubles

20 Scientists use .... to see the components of one blood cell.

a. regular microscopes b. naked eyes

c. medical glasses d. electron microscopes

2 Write the scientific term:

1 It's the state of water after its freezing.

2 It's anything that has mass and occupies space

3 It's the state of matter that has a fixed shape and volume.

4 It's the state of matter in which the particles vibrate or move around their places.

5 It's the state of matter that has a definite volume, but no definite shape.
6 It's the state of matter that has no definite shape or volume.
7 It's the state of water when its temperature is between 0°C and 100°C.
8 It's a state of matter that can be poured in a container and takes its shape.
9 It's the state of matter that keeps its shape and its particles are packed tightly.
10 It's the state of matter in which the particles have a lot of energy and move very freely.
11 It's a tool that is used to measure the length of a wall or room.
12 It's a device that is used to measure the weight of an object.
13 They are the building units of matter.
14 It is a measurement of the amount of matter.
15 It's the property of matter which is measured by a measuring cup.
16 It's a process in which ice changes into water.
17 It's a process in which water changes into ice.
18 It is a copy that is similar to the real thing.
19 It's a model of the whole world that is made in the shape of a large ball.

3 Put (✓) or (✗):

1 When you blow a balloon, the particles of air move very slowly. ( )
2 Water vapor is the solid state of water. ( )
3 Particles inside matter are in a continuous motion. ( )
4 All states of matter have the same properties. ( )
5 In a gaseous state, the particles can keep their shape. ( )
6 A liquid has a definite shape and volume. ( )
7 Matter can so small that we can't see it, such as germs. ( )
8 Models help us see germs without a microscope. ( )
9 Particles of gas are packed tightly together. ( )
10 Milk takes the shape of the container that it is poured in. ( )
11 All matter are made up of very large particles. ( )

12. Matter has four states. ( )
13. Models are a great way to see things at the right size. ( )
14. A solar system model tells us about planets; which one is the biggest and which one is the closest to Earth. ( )
15. To measure the height, we use scales. ( )
16. Scientists use regular microscopes to see the components of one blood cell. ( )
17. Particles of gold are different from the particles of iron. ( )
18. Solids can be poured and take the shape of their container. ( )
19. The particles of ice move faster than the particles of water. ( )
20. Matter can change from one state to another. ( )

4 Cross out the odd word:

1. Plastic – Iron – Water – Wood
2. Water – Milk – Sand – Oil
3. Sound – Light – Ice
4. Oil – Milk – Wood – Tea
5. Air – Water vapor – Ice – Carbon dioxide gas
6. Water – Air – Light – Wood

5 Give reasons for:

1. Salt is matter.
2. A book has a definite shape and a definite volume.
3. Wood is a solid matter.
4. Oil is considered a liquid.
5. Steam is a gaseous state.
6. Air has no definite shape or volume.
7. Solid particles can keep their shape.
8. The chef puts vegetables in a freezer or refrigerator.

6 What happens if:

1. Ice cubes are exposed to heat (concerning the state and the speed of the particles)?
2. water boils for a long time?
3. You leave a cup of milk in the freezer?
4. Water is poured into a cup of water?
5. Liquid changes into gas (concerning the speed of the particles)?

7 Complete the following sentences using the words between the brackets:

1. (Volume – gaseous – solid – Matter)
   a. .... is anything that has mass and takes up space.
   b. Water vapor is an example for .... state.
   c. The volume and shape don't change in the .... matter.
   d. .... is the amount of space that the matter takes.
2. (solar system – gaseous – Earth – solid)
   a. In .... state, the particles are packed tightly together.
   b. A .... model shows us all planets.
   c. The particles inside a .... move very freely.
   d. A globe is a model of the ....
3. (freely – slowly – gaseous – microscopes – measuring tape – Liquid)
   a. The particles of the gaseous state move ....
   b. .... is a state of matter that can be poured and takes the shape of the container.
   c. You can use a .... to measure the length of a table.
   d. In .... matter, the particles have a lot of energy.
   e. Scientists use .... to see tiny particles.
4. (definite – Volume – no definite – shape)
   a. .... is the amount of space occupied by matter.
   b. Gas has .... volume.
   c. Water takes the .... of its container.
   d. Solids have .... shapes.

5 (Oil – gold – particles – mass – gaseous)

a. Particles of .... are very close to each other.

b. .... is a liquid state of matter.

c. The volume and shape change in the .... state

d. Matter consists of very tiny identical ....

e. Matter is anything that has .... and occupies space.

8 Choose from column (A) what suits it in column (B):

A

Column (A)	Column (B)
1 Gaseous state	a. in which the particles are packed in a neat and ordered arrangement, so that they can keep their shape.
2 Liquid state	b. in which the particles are not held together and move very quickly.
3 Solid state	c. in which the particles are held together more loosely and take the shape of their container.

1 .... 2 .... 3 ....

B

Column (A)	Column (B)
1 Oxygen	a. Solid state
2 Desk	b. Liquid state
3 Juice	c. Gas state

1 .... 2 .... 3 ....

C

Column (A)	Column (B)
1 Matter	a. is a copy that is similar to the real thing
2 Temperature	b. is anything that has mass and takes up space.
3 Model	c. is one of the properties of matter that is used to measure how hot or cold the matter is

1 .... 2 .... 3 ....



Column (A)	Column (B)
1 Ice	a. takes the shape of the container, and its particles are not so near.
2 Water	b. has a fixed shape, and its particles are very near to each other.
3 Water vapor	c. does not have a fixed shape, takes up all the space of the container and the particles are far from each other.





1 .... 2 .... 3 ....



9 Classify the following:

Oil – Water vapor – Glass - Wood – Nitrogen – Water

Solid	Liquid	Gas
....	....	....
....	....	....

10 Answer the following questions:

1 a. Which model is the biggest in real?

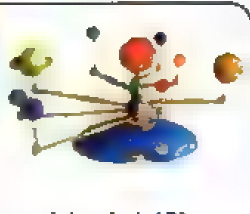
(Model 1 – Model 2)

b. A globe represents a model of ....

c. The Earth is a planet in the .... system.



Model (1)



Model (2)

2 Look at the following figure that represents the particles of milk, air and wood.

Figure (1)	Figure (2)	Figure (3)

a. Figure 1 represents the particles of ....

b. Figure 2 represents the particles of ....

c. Figure 3 represents the particles of ....

Revision

Science Exercises for November Syllabus

Concept 2: Energy Flow in Ecosystems
Concept 3: Changes in Food Webs

1 Choose the correct answer:

1. .... are both primary and secondary consumers.
   a. Plants b. Fungi
   c. Humans d. Predators

2. In any food chain, the primary consumers may be ....
   a. predators only b. prey only
   c. predators or prey d. green plants

3. Decomposers can get their energy from ....
   a. living things b. soil and water
   c. dead organisms d. the sun

4. The relationship between .... is "predator and prey" relationship.
   a. algae and corals b. frogs and locusts
   c. rabbits and carrots d. eagles and fungi

5. The tertiary consumer does not exist in food chain (..........)
   a. Algae ⟶ coral ⟶ parrotfish ⟶ shark
   b. Grass ⟶ mouse ⟶ snake ⟶ eagle
   c. Grass ⟶ locust ⟶ frog ⟶ snake
   d. Carrot ⟶ rabbit ⟶ fox ⟶ bacteria

6. In this food chain (Grass ⟶ rabbit ⟶ hawk), if the rabbits disappear, ... will increase.
   a. grass b. hawks
   c. a and b d. no correct answer

7. In this food chain (Acacia tree ⟶ giraffe ⟶ lion), the symbol (⟶) represents the flow of ....
   a. pollution b. force
   c. energy d. motion

8. Primary consumers are the .... link in their food chain.
   a. first b. second
   c. third d. final

9. Healthy desert ecosystems always require .... from time to time.
   a. strong winds b. heavy rain
   c. gentle rain d. floods

10. Which of the following examples causes the greatest damage to an ecosystem?
   a. Grass removal b. Predators extinction
   c. Predators increase d. Prey increase

11. Heavy rain may .... the desert ecosystem.
   a. improve b. benefit
   c. harm d. restore

12. If the grass is removed from an ecosystem, ... will die first.
   a. primary producers b. primary consumers
   c. secondary consumers d. decomposers

13. When a predator feeds on prey, ... is transferred between them.
   a. water b. blood
   c. motion d. energy

14. When the number of predators increases, the number of .... decreases.
   a. producers b. other predators
   c. prey d. decomposers

15. Human activities and pollution in ________ impact the marine ecosystem quickly.
   a. cities b. forests
   c. deserts d. islands

16. All the following examples represent bad human activities, except ________ .
   a. overfishing b. air pollution
   c. floods d. plastic pollution

17. Nutrients are recycled back into the ecosystem by the ________ .
   a. predators b. prey
   c. consumers d. decomposers

18. In most marine food webs, ________ are considered producers.
   a. grass b. algae
   c. bacteria d. small fish

19. All the following have bad impact on the marine ecosystem, except ________ .
   a. island pollution b. heavy rain
   c. plastic pollution d. overfishing

20. If the number of primary consumers increases so much, ________ will disappear.
   a. producers b. decomposers
   c. secondary consumers d. tertiary consumers

21. All the following organisms can make their own food, except ________ .
   a. grass b. worms
   c. algae d. microorganisms

22. If the climate change was suitable, the living organisms will ________ .
   a. die b. migrate
   c. survive d. extinct

23. ________ live on the tops of mountain cliffs and depend on fish as their main source of food.
   a. Eagles b. Hawks
   c. Owls d. Seabirds

24 .... are/is considered the producers in the marine food web.

a. Small fish b. Coral reefs
c. Marine microorganisms d. Grass

25 The migration of microorganisms to a new habitat is due to the increase of ....

a. the air temperature b. the water temperature
c. the number of seabirds c. the number of fish

26 Increasing water temperature may cause all the following, except ....

a. increasing microorganisms b. coral bleaching
c. migration of fish d. death of some seabirds

27 If the turtle sees a plastic piece, the turtle will ....

a. avoid it b. escape quickly
c. begin to eat it d. digest it

28 .... is one of the best ways to protect the marine ecosystem.

a. Throwing sewages in seas b. Using plastics for single use
c. Breaking plastics d. Recycling plastics

29 Micro-plastics are formed by the effect of the ....

a. air b. sun
c. water d. soil

30 .... is an area in the ocean where the small pieces of corals are nurtured.

a. Coral reefs b. The nursery
c. Protectorate d. Garden

31 .... is one of the ways done by coastal communities to reduce plastic pollution.

a. Replacing wooden forks with plastic ones
b. Using grocery plastic bags
c. Using single-used plastics d. Using cloth bags

32. All the following are affected by pollution, except ....
    a. living organisms as human, plants and animals
    b. non-living things as air, water and soil
    c. all components of the ecosystem
    d. dead organisms only

33. If the number of ...., the grass will increase in the ecosystem.
    a. decomposers decreases
    b. producers increases
    c. primary consumers increases
    d. primary consumers decreases

34. .... are the top predators in their food chain.
    a. Frogs
    b. Birds
    c. Alligators
    d. Butterflies

35. Decomposers directly benefit from .... and complete the food chain cycle.
    a. water and fish
    b. air and birds
    c. dead organisms
    d. soil and dead producers

36. All the following organisms depend on another organism to get their energy, except ....
    a. predators
    b. prey
    c. green plants
    d. b and c

37. A population change refers to the increase or decrease in ....
    a. water and food resources
    b. number of living organisms
    c. the weather temperature
    d. the water temperature

2 Complete the following using the words between the brackets:

1. .... of the energy in dead prey are recycled to the soil.
   (10% – 90%)

2. .... is a natural recycling factory.
   (Photosynthesis – Decomposition)

3. Corals in the marine food web are considered as ....
   (consumers – producers)

4. ______ is/are considered a healthy ecosystem. (Coral - Coral reefs)
5. Rabbits die quickly when ______ disappear from the ecosystem. (hawks - grasses)
6. ______ water is suitable for microorganisms. (Cold - Warm)
7. Corals ______ the seawater to get their food. (absorb - filter)
8. Micro-plastics are very harmful as they are not ______. (toxic - nutritious)
9. A long food chain has a great number of ______. (producers - consumers)
10. Gentle rain may ______ the desert ecosystems. (benefit - harm)
11. Habitat loss may ______ the ecosystems. (benefit - harm)
12. ______ water is healthy for microorganisms. (Cold - Warm)
13. Heavy rain may ______ the desert ecosystems. (improve - destroy)
14. Habitat restoration may ______ the ecosystems. (benefit - harm)
15. ______ of the energy in dead prey are transferred to predators. (10% - 90%)
16. Habitat loss for any living organism make them ______. (go extinct - survive)
17. Decomposers recycle nutrients to ______. (soil - air)
18. Coral bleaching means the coral color turns to ______. (red - white)
19. Algae in the marine food web are considered as ______. (consumers - producers)
20. The amount of rainfall has a strong effect on the ______ ecosystem. (marine - desert)

3 Put (✓) or (✗):

1. Heavy rain improves the desert ecosystem more than gentle rain. ( )
2. Energy remains in an ecosystem but it's transferred between its components. ( )
3. Living organisms always need non-living things in the ecosystem to survive. ( )
4. Coral reefs lose their colors when the water temperature decreases. ( )
5. A primary consumer could be a predator in its food chain. ( )
6. Humans are both primary and secondary consumers. ( )
7. The restoration process always takes a little time. ( )
8. When a plant dies, consumers may not be found in this short food chain. ( )
9. Overfishing is one of the most natural events that impact the marine ecosystem. ( )
10. Algae enter the tissue of corals when the water temperature increases. ( )
11. If the grass is removed from the desert, hawks will die quickly. ( )
12. It is better to use single-used plastic forks to reduce plastic pollution. ( )
13. Palau work with fishers to make sure they are not overfishing in coral reefs. ( )
14. Heavy rain in the desert causes the growth of more producers. ( )
15. The number of prey increases when the number of predators decreases. ( )
16. Increasing the number of primary consumers may make producers disappear. ( )

17. Secondary consumers may migrate if the producers are removed from the ecosystem. ( )
18. Microorganisms recycle back the important elements to water. ( )
19. When the water becomes warm, seabirds have to move for another cooler area. ( )
20. Habitat loss may cause extinction for any species of living organisms. ( )
21. Using plastic grocery bags is better than using cloth bags. ( )
22. Sea turtles and corals are always in danger due to plastic pollution. ( )

4 Write the scientific term for each of the following:

1. The first organism to be impacted by the death of the producer. (..........)
2. Organisms that return the energy back to the ecosystem. (..........)
3. The process of recycling the energy back to the ecosystem. (..........)
4. The producers of the marine food web. (..........)
5. A bird that builds its nest on the top cliff and depends on fish to get its energy. (..........)
6. A process in which humans can make new products from waste materials. (..........)
7. A phenomenon that happens to living organisms due to habitat loss. (..........)
8. A phenomenon that causes the coral to turn completely white. (..........)
9. A human activity that decreases the number of fish in the marine area. (..........)
10. Rays coming from the sun that cause the formation of microplastics. (..........)

11. The number of living organisms of one species. (..................)
12. Organisms that break down the remains of dead organisms. (..................)
13. It is from the most diverse marine ecosystems on Earth. (..................)
14. Small pieces of plastic that formed due to the UV of the sun falling on it. (..................)
15. The increase or decrease in the number of living organisms. (..................)
16. The harm that affects air, water, or soil due to human activities. (..................)
17. It is the returning of land and water back to how they were before harm was done. (..................)
18. It is an area in the ocean where the small pieces of corals are nurtured. (..................)
19. A way of life that coastal communities near the reefs have adopted. (..................)
20. The suitable ecosystem for plant-community ecologists to make their researches. (..................)

5 Classify the following organisms in this table:

Rabbit – Vulture – Hawk – Cockroaches – Bactria –
Hyenas – Grass – Crabs – Algae – Houseflies – Alligator –
Acacia tree – Slugs – Marine microorganisms –
Earthworms – Frog – Human – Millipedes – Deer

Producer	Consumer	Decomposer	Scavengers

6 Choose from column (A) what suits it in column (B):

1

Column (A)	Column (B)
1 Gentle rains	a. harm the desert ecosystem.
2 Heavy rains	b. reduces ocean pollution.
3 Overfishing	c. improve the desert ecosystem.
4 Recycling plastics	d. destroys the marine ecosystem.

1 .... 2 .... 3 .... 4 ....

2

Column (A)	Column (B)
1 Photosynthesis	a. causes death or extinction of living organisms.
2 Decomposition	b. is a way that is used to reduce plastic pollution.
3 Restoration	c. means that the coral color turns to white.
4 Zero plastics	d. releases oxygen in the air.
5 Habitat loss	e. is recovering a shelter to animals.
6 Coral bleaching	f. recycles nutrients to the soil.

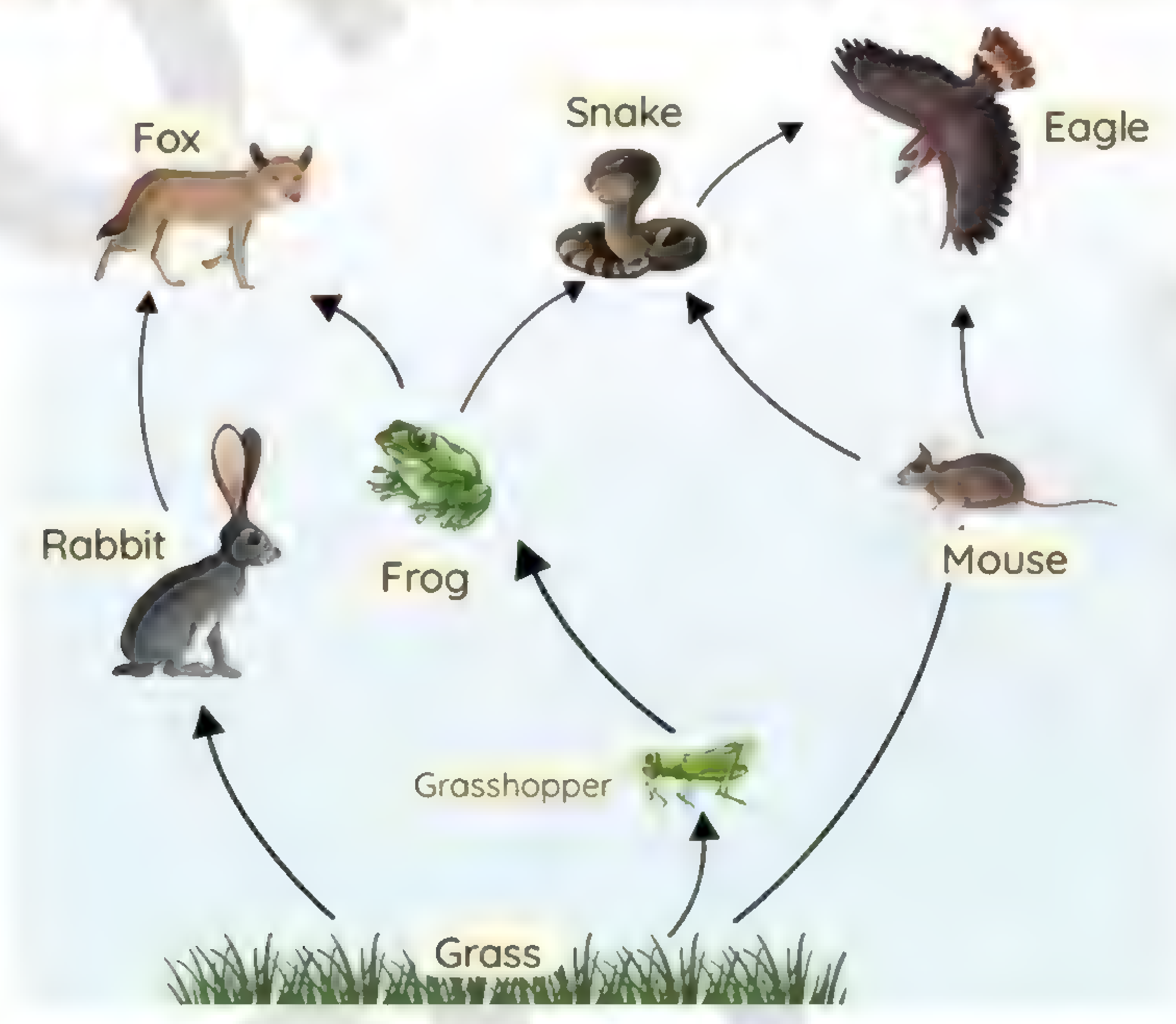
1 .... 2 .... 3 ....
4 .... 5 .... 6 ....

7 Cross out the odd word:

1. Snails – Houseflies – Slugs – Earthworm (..........)
2. Vultures – Crabs – Cockroaches – Fungi (..........)
3. Grass – Algae – Bacteria – Marine microorganisms (..........)
4. Algae – Rabbits – Whales – Corals (..........)
5. Grass – Zooplankton – Fox – Mouse (..........)
6. Overfishing – Floods – Microplastics (..........)

8 Variant questions:

1. Study the following food web, then answer the questions:



1. **From this food web, complete the following to form three food chains:**

   a. .... → .... → ....

   b. .... → .... → .... → ....

   c. .... → .... → .... → .... → ....

2. **Complete the following sentences using the words between the brackets:**

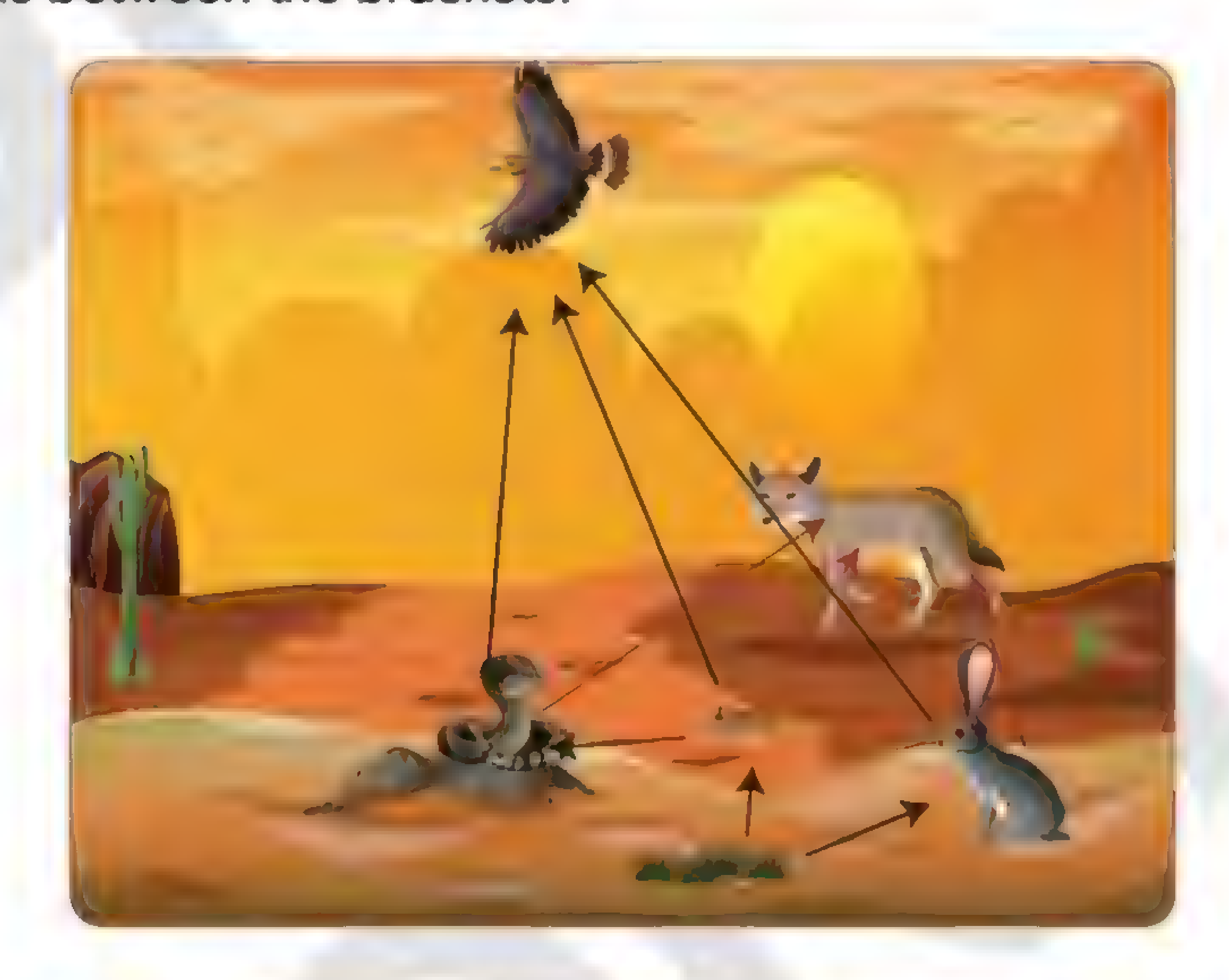
   a. The number of primary consumers is .... organisms. **(two - three)**

   b. The .... uses the energy of the sun to produce its own food. **(grass - eagle)**

   c. The eagle is considered a tertiary consumer when eating the .... **(mouse - snake)**

   d. The .... may be a predator and prey in the same time. **(rabbit - frog)**

Study the following food web, then complete the sentences using the words between the brackets:



a. If the population of rabbits increases, ... may disappear. **(foxes - grass)**

b. The snake is considered a .... consumer. **(primary - secondary)**

c. The rabbit provides energy to the .... **(eagle - grass)**

d. If the grass is removed, the mouse and rabbit will .... **(migrate - die)**

Study the following food web, then complete the sentences using the words between the brackets:

C
B → C, D → C
A → B, E → D
E → A

a. Letter (........) represents the producer. **(A - E)**

b. Letter (B) represents the .... consumer. **(primary - secondary)**

c. Letter (C) is the tertiary consumer when it feeds on letter (........). **(B - D)**



4. **Study the following figure, then answer the questions:**



a. What is the name of this phenomenon? ....

b. Is this a healthy ecosystem? ....

c. What is the reason of this phenomenon? ....

9 Give reasons for:

1. Scavengers play an important role before the decomposition process.
2. Decomposition process is a nature's recycling factory.
3. Recycling process helps in decreasing pollution.
4. Increasing the number of one species of living organisms causes its death.
5. Palau Island manages land activities.
6. Gentle rain benefits the desert ecosystem.
7. Falling of heavy rain harms the desert ecosystem.
8. Microorganisms in water make the same role of grass in the desert.
9. The coral reef is the most diverse and valuable ecosystem.
10. Sometimes sea turtles feed on plastic pieces.
11. Increasing water temperature lead to coral bleaching.
12. Plastics are so harmful for the marine ecosystem.
13. Microplastics have a bad effect on corals.
14. Restoration process helps to recover ecosystems.
15. The nursery plays an important role in the recovery of coral reefs.

10 What happens if:

1. Decomposers disappear in an ecosystem.
2. Increasing the number of secondary consumers.
3. Grass disappears from an ecosystem.
4. The number of one species increases so much. (Concerning food resources)
5. The number of predators increases so much. (Concerning number of prey)
6. Gentle rain falls in the desert.
7. Heavy rain falls in the desert.
8. The water becomes warm. (Concerning corals and microorganisms)
9. The climate change becomes unsuitable for living organisms.
10. The amount of plastics in water rises.



Concept 4: Matter in the World Around Us

1 Choose the correct answer:

1. Which matter has a definite shape?
   a. Water b. Ice c. Oil d. Air
2. .... can be poured in any container.
   a. Oxygen b. Juice c. Ice d. Air
3. Anything that has mass and occupies space is called ....
   a. energy b. force c. matter d. weight
4. Any matter exists in .... state(s).
   a. one b. two c. three d. four
5. All the following examples represent solid states, except ....
   a. juice b. feather c. ice d. rock
6. All matter around us consist of ....
   a. cells b. particles c. nutrients d. proteins
7. Matter can be described by ....
   a. hardness b. color c. shape d. all the previous
8. Which of the following examples isn't a matter?
   a. Bird's feathers b. Cup of water
   c. Empty cup d. Bird sound
9. .... is considered an invisible matter.
   a. Milk b. Air c. Father d. Sound
10. Cold milk and hot tea are similar in ....
    a. color b. temperature c. taste d. state
11. .... are different matters but they exist in the same state.
    a. Water and ice b. Wood and air
    c. Milk and juice d. Air and water
12. .... are same matters, but they exist in the different states.
    a. Wood and brick b. Oxygen and air
    c. Oil and tea d. Ice and water vapor

13. Tiny particles inside ________ move very freely.
   a. water b. air c. wood d. ice
14. You can measure your height using a ________ .
   a. balance b. thermometer c. ruler d. metric stick
15. Thermometer can be used to know the ________ of water.
   a. shape b. color c. temperature d. weight
16. Water is described by all of these properties, except ________ .
   a. we can pour it b. it occupies space
   c. it has a definite shape d. it takes the shape of the container
17. Which of the following matters has no texture?
   a. Feather b. Oxygen c. Water d. Ball
18. ________ has a definite size and an indefinite shape.
   a. Air b. Ice c. Water d. Wood
19. Some matters are very small and we cannot see them, such as ________ .
   a. water b. germs c. pencils d. insects

2 Put (✓) or (✗):

1. The state of matter can't be changed from one form to another. (   )
2. Matter exists everywhere around us in nature. (   )
3. The particles in ice move more freely than in water. (   )
4. Water always takes the shape of the container that it is poured in. (   )
5. Matter consists of tiny moving particles. (   )
6. Water vapor has no texture and it is a visible matter. (   )
7. Gases completely fill a closed container, such as when you blow a balloon. (   )
8. Ice melts into water by cooling it. (   )
9. Water has indefinite shape and size. (   )
10. Two objects can take up the same space at the same time. (   )

3 Write the scientific term:

1. Anything around us that has mass and occupies space. (..........)
2. They exist inside matter in a continuous motion. (..........)
3. A state of matter in which matter has a definite shape. (..........)
4. A state of matter that can be poured in a container. (..........)
5. A device that is used to measure the height of a boy. (..........)
6. A device that is used to measure the temperature of milk. (..........)
7. A device that is used to measure the mass of apples. (..........)
8. A process in which ice changes into water. (..........)
9. A process in which water changes into ice. (..........)

4 Complete the following sentences:

1. Matter is anything that has .... and occupies space.
2. Matter can exist in .... states that are ...., ... and ....
3. Matter can be described by ...., ... or ....
4. The .... of particles inside matter can describe its state.
5. The particles inside .... move very freely.
6. Light and sound are not ...., but they are considered forms of ....
7. ...., ... and .... are examples of gaseous states.
8. Water has .... shape and .... size.
9. Some matters are very small and we cannot see them, such as .... or ....
10. .... can be poured in a container and it takes ....

5 Cross out the odd word:

1. Oil – Milk – Feather – Juice (............)
2. Wood – Ice – Oxygen – Iron (............)
3. Air – Water vapor – Ice – Carbon dioxide (............)
4. Water – Air – Light – Wood (............)

6 Choose from column (A) what suits it in column (B):

[1]

Column (A)	Column (B)
1 Matter	a. is not a matter.
2 Particles	b. is an invisible form of matter.
3 Sound	c. exist inside the matter in a continuous motion.
4 Oxygen	d. exists in three states.

1 .... 2 .... 3 .... 4 ....

[2]

Column (A)	Column (B)
1 Solid state	a. has indefinite shape and definite size.
2 Liquid state	b. has definite shape and size.
3 Gaseous state	c. has indefinite shape and size.

1 .... 2 .... 3 ....

[3]

Column (A)	Column (B)
1 Thermometer	a. is used to measure the height of a boy.
2 Balance	b. is used to measure the temperature of hot tea.
3 Measuring tape	c. is used to measure the mass of fruits.

1 .... 2 .... 3 ....

7 Compare between the following:

P.O.C	Solid	Liquid	Gas
Size	....	....	....
Shape	....	....	....
Texture	....	....	....
Motion of particles	....	....	....
Space between particles	....	....	....

8 Study the following figure, then complete the following sentences:

1 Melting means that matter changes from figure (............) to (............).

2 In figure (   ), particles are very close to each other.

3 The particles in figure (........) move more freely.

4 Both figures are same in ....

5 Both figures are different in ....

1 2

9 Give reasons for:

1 Air is a matter.

2 Air has no definite shape and volume.

3 Although gases are invisible, we can know they exist.

4 Solids can keep their shape.

10 What happens if:

1 Water is poured into a cup of water.

2 Ice cubes are exposed to heat.

3 Liquid changes into gas (Concerning the speed of particles).

Guide Answers

Science Exercises for November Syllabus



Concept 2: Energy Flow in Ecosystems
Concept 3: Changes in Food Webs

1

1. c 2. b 3. c 4. b
5. d 6. a 7. c 8. b
9. c 10. a 11. c 12. b
13. d 14. c 15. d 16. c
17. d 18. b 19. b 20. a
21. b 22. c 23. d 24. c
25. b 26. a 27. c 28. d
29. b 30. b 31. d 32. d
33. d 34. c 35. d 36. c
37. b

2

1. 90%
2. Decomposition
3. consumers
4. Coral reefs 5. grasses
6. Cold 7. filter
8. nutritious 9. consumers
10. benefits 11. harm
12. Cold 13. destroy
14. benefit 15. 10%
16. go extinct 17. soil
18. white 19. producers
20. desert

3

1. ✗ 2. ✓ 3. ✓ 4. ✗
5. ✗ 6. ✓ 7. ✗ 8. ✓
9. ✗ 10. ✗ 11. ✗ 12. ✗
13. ✓ 14. ✗ 15. ✓ 16. ✓
17. ✓ 18. ✗ 19. ✓ 20. ✓
21. ✗ 22. ✓

4

1. Primary consumer
2. Decomposers
3. Decomposition process
4. Algae 5. Seabird
6. Recycling process
7. Extinction
8. Coral bleaching
9. Overfishing
10. Ultra Violet Rays (UV rays)
11. Population 12. Scavengers
13. Coral reefs
14. Microplastics
15. Population change
16. Pollution
17. Habitat restoration
18. Nursery
19. Zero plastics 20. Prairie

5

Producer	Consumer
1. Grass	1. Rabbit
2. Algae	2. Hawk
3. Acacia tree	3. frog
4. Marine microorganisms	4. Alligator
	5. deer
	6. Human

Decomposer	Scavengers
1. Bactria	1. Vulture
2. Slugs	2. Cockroaches
3. Earthworms	3. Hyenas
4. millipedes	4. Crabs
	5. Houseflies

6 ① 1 ⇨ c 2 ⇨ a
3 ⇨ d 4 ⇨ b
② 1 ⇨ d 2 ⇨ f
3 ⇨ e 4 ⇨ b
5 ⇨ a 6 ⇨ c

7 ① Houseflies ② Fungi
③ Bacteria ④ Rabbits
⑤ Zooplankton
⑥ Floods

8 ① [1] a. Grass ⇨ Rabbit ⇨ Fox
b. Grass ⇨ Mouse ⇨ Snake ⇨ Eagle
c. Grass ⇨ Grasshopper ⇨ Frog ⇨ Snake ⇨ Eagle
[2] a. three b. grass
c. snake d. frog
② a. grass b. secondary
c. eagle d. die
③ a. E b. secondary
c. B
④ a. Coral bleaching
b. No
c. Increasing the temperature of water.

9 ① Because scavengers break down food into small pieces before the decomposition process.
② Because decomposition process returns nutrients back to the soil again.
③ Because recycling process helps in producing new products from waste materials instead of throwing them in landfills.
④ Because as the number of one species of living organisms increases, the food and water resources may run out and so on they will die.
⑤ To control the quality of the marine ecosystem in it.
⑥ Because gentle rain helps producers to grow so the desert ecosystem improves.
⑦ Because falling of heavy rains may cause floods, so the grass dies and the desert ecosystem is destroyed.
⑧ Because marine microorganisms can make their own food.
⑨ Because the coral reef provides marine organisms with shelter and food.

10. Because sea turtles cannot know the difference between corals and plastic pieces.

11. Because when water becomes too warm:
    1. Corals will get rid of the algae living in their tissues.
    2. This causes the coral to turn completely white.
    3. Bleaching events stress corals and often they do not survive.

12. Because plastic is not nutritious and it can also be toxic and sharp.

13. Because corals filter the seawater to get their food and they also ingest microplastics as the pieces of food that they are getting from the water.

14. Restoration process helps in restoring the land and water back to how they were before harm was done.

15. Because nursery is an area in the ocean where the small pieces of corals are nurtured until they can be moved back to the reefs where they were dying.

10

1. Dead things would build up, just like the trash in landfills.
2. The number of primary consumers will decrease.
3. Primary consumers will die first, while other consumers may migrate or die.
4. Food and water resources will run out and disappear.
5. The numbers of prey decrease.
6. Producers will grow and the desert ecosystem is improved.
7. Floods occur, so producers will die and the desert ecosystem is destroyed.
8. When the water becomes warm:
    1. Corals will get rid of the algae living in their tissues and their color turns completely white which stress corals and often they do not survive.
    2. Marine microorganisms will move toward an area where the water is cooler.
9. The population of species will decrease by them moving to another place or dying.
10. Plastic will cause damage to the marine life and affect marine organisms negatively.

Concept 4: Matter in the World Around Us

1
1. b
2. b
3. c
4. c
5. a
6. b
7. d
8. d
9. b
10. d
11. c
12. d
13. b
14. d
15. c
16. c
17. b
18. c
19. b

2
1. ✗
2. ✓
3. ✗
4. ✓
5. ✓
6. ✗
7. ✓
8. ✗
9. ✗
10. ✗

3
1. Matter
2. Particles
3. Solid state
4. Liquid state
5. Metric stick
6. Thermometer
7. The balance
8. Melting process
9. Freezing process

4
1. mass
2. three – solid – liquid – gas
3. shape - color - texture
4. movement
5. gas
6. matter - energy
7. Water vapor – oxygen gas – carbon dioxide gas
8. indefinite - definite
9. germs - air
10. Water – the shape of the container

5
1. Feather
2. Oxygen
3. Ice
4. Light

6
1. 1 ⇨ d, 2 ⇨ c, 3 ⇨ a, 4 ⇨ b
2. 1 ⇨ b, 2 ⇨ a, 3 ⇨ c
3. 1 ⇨ b, 2 ⇨ c, 3 ⇨ a

7

P.O.C	Solid	Liquid	Gas
Size	Definite	Definite	Indefinite
Shape	Definite	Indefinite	Indefinite
Texture	Smooth	Moist	No texture
Motion of particles	Move only a little bit	Move more freely	Move very freely
Space between particles	The particles are packed tightly with each others.	The particles have more space.	The particles have a lot of space.

8
1. 1 to 2
2. 1
3. 2
4. matter
5. state

9
1. Because air has mass and occupy space.
2. Because the particles inside air have a lot of space between them and they move very freely.
3. Because they completely fill a closed container, such as when you pump air into a bicycle tire tube.
4. Because particles inside solids are close to each other and they move only a little bit.

10
1. Water will take the shape of the container.
2. Ice will be changed from the solid state into the liquid state.
3. The speed of the particles will increase and they will move very freely.



Concept 1.3 Change in food webs:

Lesson (1)

The ecosystem affected by:

1- Pollution.
2- Climate changes.
3- Human activities.

Pollution: it is the harms happen to air, water and soil due to human activities.

The effects of environmental changes on the food web?

1- The disappearance of producer: make consumers migrate to search for food.
2- The presence of a large number of one type of organism: make their Food disappear.

Protection of the ecosystem:

Protection the marine environment in Palau Island:

Control the human activities on land by:

1- Avoid water pollution (when throwing waste materials in ocean.
2- Prevent overfishing (catching many fish from rivers, seas and ocean.

Note:

-Fishermen mustn't overfish coral reefs to conserve marine environment .
If an ecosystem changes the food webs will change.



➢The relation between all the components of an ecosystem for keeping the ecosystem balanced

-If there is a gentle rain in the desert ➡ the desert ecosystem may be improved (*Give reason*)

Because rainwater will feed the plants.

-If There is a heavy rain in the desert ➡the desert ecosystem may be harmed.

(*Give reason*)

Because the water of heavy rain will cause flooding.

-If there is a drought and all the grass dies ➡ the food web in the ecosystem may be destroyed. (G.R)

Because the plants will die and also the organisms will die.

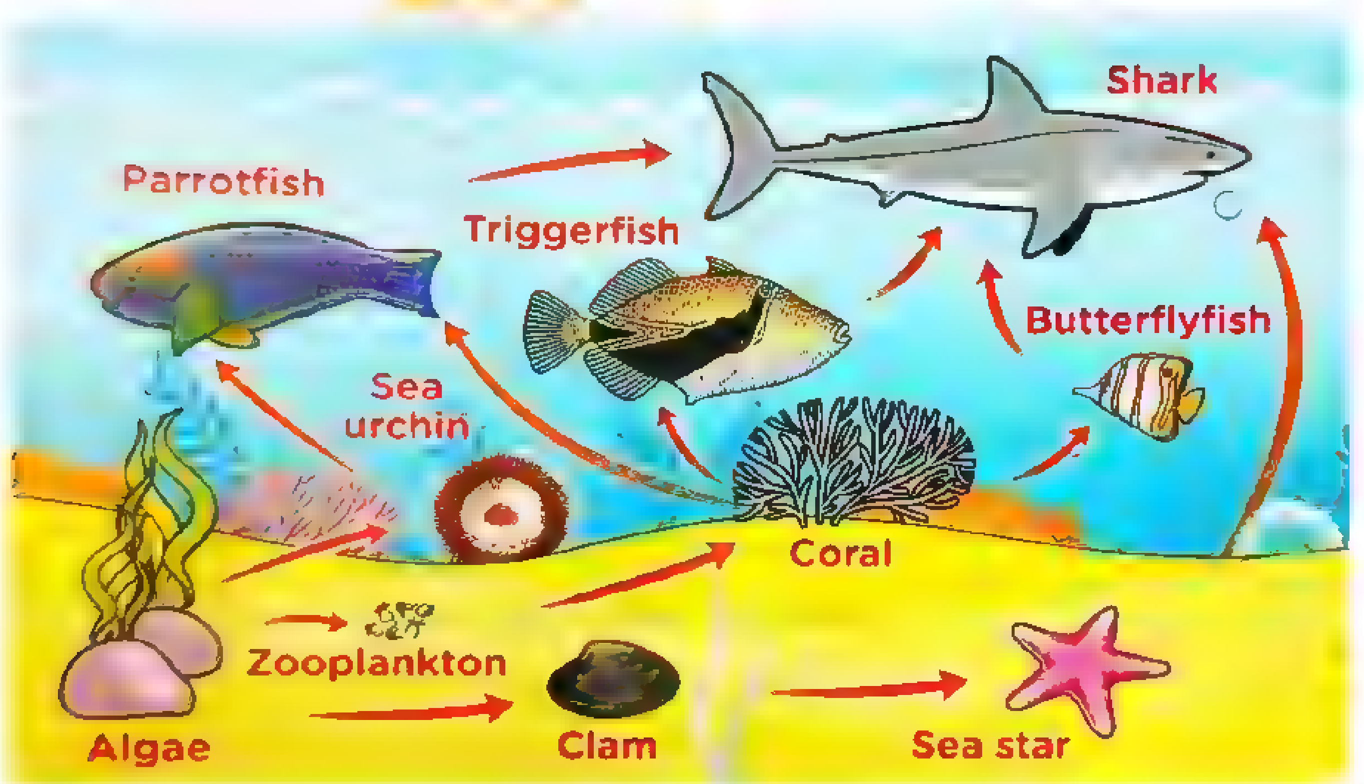
- If there are many top predators in the food web ➡ the other organisms in the food web like lions, tigers and sharks may be harmed. (Give reason)

because the top predators will eat all the organisms.

NOTE:

-THE SUN PROVIDES THE EARTH WITH LIGHT AND WARM .

🖶Marine food web:





- Algae ➡ clam ➡ sea star ➡ shark
- Algae ➡ zooplankton ➡ coral ➡ butterfly fish ➡ shark
- Algae ➡ zooplankton ➡ coral ➡ tiger fish ➡ shark
- Algae ➡ zooplankton ➡ coral ➡ parrot fish ➡ shark
- Algae ➡ sea urchin ➡ parrot fish ➡ shark

Worksheet (1)

1-Choose the correct answer:

1- On extreme hot climate, the water of a lake ....

a. Increases due to evaporation. b. Decreases due to evaporation.
c. Changes into ice. d. Has a lower temperature.

2- All the following are human activities that affect a marine ecosystem, except........

a. Flooding. b. Throwing human wastes.
c. Overfishing. d. Throwing plastic garbage.

3-All the following are top predators, except ....

a. Hawks.
b. Tigers.
c. Butterfly fish.
d. Lions.

4-The marine food web usually starts with...........

a. Clam
b. Algae.
c. Zooplankton.
d. Parrotfish.



5-If clam are completely removed from a marine ecosystem, the survival of .... May be affected.

a. Tiger fish
b. Sharks
c. Sea urchin
d. Sea stars

Put (✓) or (x) :

1-Overfishing is one of the climate changes that affects the marine ecosystem. ( )

2-zooplankton can make their own food by photosynthesis process. ( )

3-if we introduce a new predator to an ecosystem , this ecosystem will be affected . ( )

What happens if...?

1- Throwing big amounts of plastic garbage and waste materials in water.

....

....

[illegible]

- **Energy can't be created or destroyed but it transfers.**
- **The first source of energy is the sun, then energy transfers to plants (producer), then transfers to (consumers) that when they die the (decomposers) convert them into simple substances and return the energy back to the soil.**



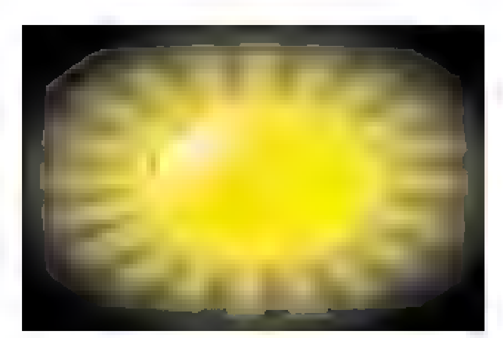
Primary Consumer
Grasshopper
Secondary Consumer
Frog
Sun
Water
Grass
Producer
Snake
Tertiary Consumer
Fungi
Hawk
Decomposer
Final Consumer

Food Chain

Desert food web:



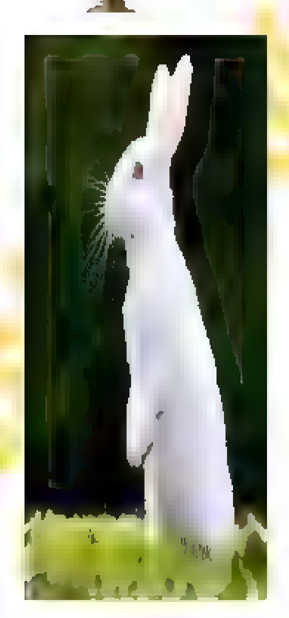
➢ The sun transfers energy to producers until it reaches the decomposers, as follows:



- The sun is the main source of energy.

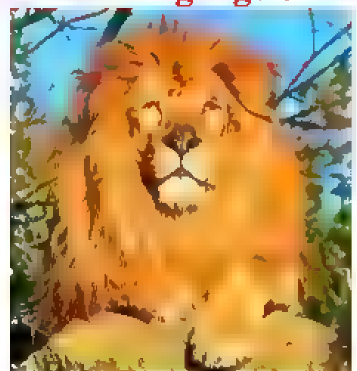


- Producer: green plants



1. Primary consumer: energy transferred to the primary consumer when it feeds on plants.





- **Secondary consumer:** energy transferred to the secondary consumer when it feeds on primary consumer.



1. **Decomposer :** gets energy from decomposing the bodies of dead organism.

- The energy in the overall system remains as the same .
- Energy is transferred between living organisms, most of the energy is recycled by decomposers back into the ecosystem .





Worksheet (2)

➢Write the scientific term of each of the following :

1. They are consumers which feed on secondary consumers. (   )
2. They are living organisms that include bacteria and fungi, which return energy back to the soil.   (   )

➢Complete the following sentences:

1- Predators of living organisms may be .... for other living organisms.

2- A predator gets .... From the prey which feeds on.

➢Put (✓) or (x) and correct the wrong answer:

1) The energy in an ecosystem change by time . (   )
2) The soil fertility depends on decomposers.   (   )
3) The sun produces energy that decomposers use to make their food. (   )

➢Choose the correct answer:

1) Decomposers play an important role in returning the energy back to all the following, except ....

A)the air

B) The soil

C) The water

D)The decomposers

2) In a food chain, the energy transfer ....

A)From a predator to a prey.

B) From a prey to a predator.

C) From a predator to a producer.

D)From a consumer to a predator.

3)It is better for a predator in a food web, to have ....

A) Only one type of decomposers.

B) More than one type of decomposers.

C) Only one type of prey.

D) More than one type of p



Lesson (2)

Population

❖ **Population: it is the number of organisms of one type of species living in an area.**

❖ Factors affect the population:

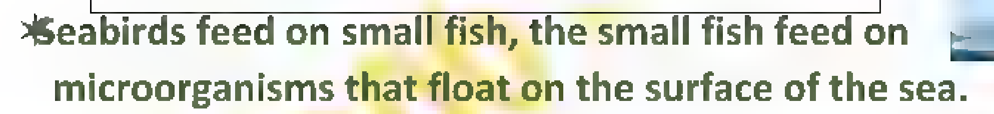
✓ **increasing or decreasing the amount of water.**
✓ **increasing or decreasing the temperature.**
✓ **Climate change.**

❖ We know that all species depend on other species for survival, so an increase or decrease in one species affect the population causing **population change.**

❖ Example:

Microorganisms (producer) ➞ small fish ➡ seabirds

*Seabirds feed on small fish, the small fish feed on microorganisms that float on the surface of the sea.
*Seabirds build their nests on the topof mountain cliffs.



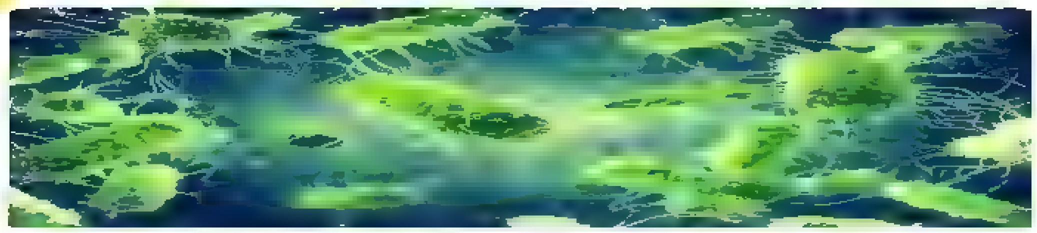
Note:

✓ Microorganisms:

🖶 **They are too small organisms that can't be seen by eyes.**

🖶 **They are producers in the marine food web.**

🖶 **They make their own food and live in cold water habitats.**



➢ If water temperature increase, microorganisms will move search for colder water then small fish search for microorganisms that lead to death of sea birds.

Worksheet (2)

Give reasons for:

If the temperature of water increase the sea birds will die.

………………………………………………………………………………………

Write the scientific term of each of the following:

1-They are organisms that are too small for people to see with only their eyes . (

(………………………)

2-It is the number of organisms of one type of species live in an area.

( )

Put (✓) or (x) :

1-any food chain can be formed of producers only . ( )

2-seabirds eat small fish that swim near the water surface. ( )

3-a desert food chain doesn't contain any type of fish or sharks. ( )



Lesson (3)

Habitat loss

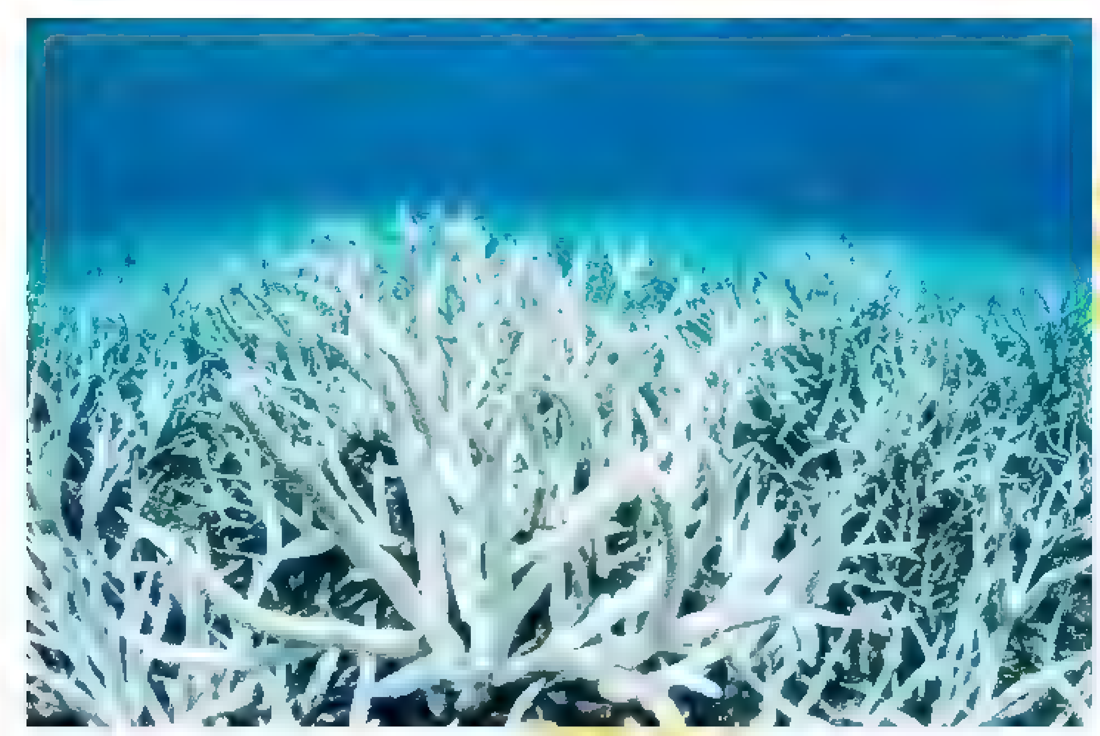
- **Healthy habitats are important to all organisms in food web (G.R)**: because they provide organisms with resources that they need to survive.
- **When these habitats are destroyed, different organisms may not be able to survive.**
- **Example of habitat loss in a coral reef system :**

Coral reef:

- ✓ **Some of the most diverse and valuable ecosystem on earth.**
- ✓ **they provide food and shelter for large numbers of fish and other marine organisms .**
- ✓ **They are important for tourism.**



When water is very warm, coral reef will get rid of the algae living in their tissues



it makes coral reefs turn completely into white.

- The result of coral bleaching:
- ✓ Fish and other marine that depend on coral reef for food and shelter may die.
- ✓ People that depend on coral reefs and for food will be negatively affected.

Notes:

- Human activities can affect the ecosystem by :
- Building up more buildings.
- Throwing waste materials in water.
- Overfishing in seas and oceans.



Plastic pollution:

- Plastic in sea affect marine life, where whales, sea turtles, sea birds and fish can't often differentiate between real food and plastic.
- Sea turtles can't differentiate between a jelly fish and plastic so it eat a lot of plastic and get harmed.
- Coral reefs harmed by feeding on plastic due to the effect of UV rays which break down the plastic into micro plastic which look like the food of coral reef



Worksheet (3)

• Choose the correct answer:

1- Healthy marine environment is important for survival of …….

A) Humans

B) Lions

C) Fish

D) Deers

2- When water temperature increases, algae leave tissues of ………. so they become bleached.

A) Seabirds

B) Coral reefs

C) Clam

D) Sharks

3- Both of sea turtles and ………. Are present in the same marine food chain.

A) Deers

B) Jelly fish

C) Eagles

D) Tigers

4- When coral reefs……………the seawater, they may ingest micro plastics.

A) Evaporate

B) Filter

C) Cool

D) Warm

• Write the scientific term of each of the following:

1) It is a condition in which coral reefs turn completely into white.

( )

2) Small pieces of plastic in the size of rice grains and they cause harms to marine organisms.

( )



3) It is a process that people can do for plastic waste materials Instead of throwing them in the seas and oceans. (

- **Complete the following sentences using the these words:**

(Toxic – overfishing – shelter – extinction – predator)

1- Healthy natural resources include clean air, healthy food, water and suitable.....................

2- The human activity that directly decreases the marine population is ....

3- Habitat loss is not only decrease marine population but also it is one of the main causes of ....

4- When a sea turtle Eats a jelly fish, this means that the sea turtle is a ....

- **Give reasons for :**

1- Coral bleaching happens when the water temperature rises.

....

....

2- Both of rising water temperature and ingesting micro plastic are harmful for coral reefs.

....

....

....



Lesson (4)

Habitat Restoration

- **Habitat Restoration:** it is the process of returning a habitat back to its natural state before harm was done.

✓ **Habitat Restoration projects** try to repair all parts of the habitat.
✓ Most of habitat restoration projects require a lot of work and take a long time.

❖ **Example :**

Rebuilding coral reefs: (a coral reef rehabilitation project)

✓ scientist collect small parts of different coral species and then move them to a nursery.

- **Nursery:** is an area in the sea, where scientists take care of small pieces of coral until they grow up.
- **Protecting coral reefs from plastic pollution:**

In Egypt, coastal communities near the coral reefs applied a new way of life known as a (zero plastic) where people can:

✓ Replace plastic forks with wooden ones.
✓ Replace plastic bags with cloth ones.





Worksheet (4)

- **Put (✓) or (x) :**

1) Citizens must share in returning a habitat back to its healthy conditions before harm was done (   )
2) Nursery is a natural habitat in the sea, in which coral reefs continue growing and reproducing. (   )

   Removing plants negatively affects consumers in an ecosystem . ( )

- **Write the scientific term of each of the following:**

1- It is an area in the sea, where the scientists take care of small pieces of coral until they grow up. (   )

2- A process of returning a habitat back to its natural state before harm was done. (   )

- **Choose the correct answer:**

1- Habitat Restoration projects allow scientists to ....that occur to an ecosystem.

A) Increase harms.

B) Decrease harms.

C) Keep harms.

D) Increase damage.

2- The place in which we can take care of small pieces of coral until they grow up is known as ....

A) Food chain

B) Food web

C) Grassland

D) Nursery

3- All the follow processes show coral reefs in healthy conditions, except...............

A) Growing

B) Bleaching

C) Reproducing

D) Filtration

4- Zero plastics projects that is applied in Egyptian coastal communities, means that the using of plastic products decreases by ....



A) 0%

B) 10 %

C) 90 %

D) 100%

- **Give reasons for :**

It is better to keep natural resources healthy than applying restoration projects.

……

………



UNIT (2) CONCEPT 2 .1 LESSON.1

MATTER

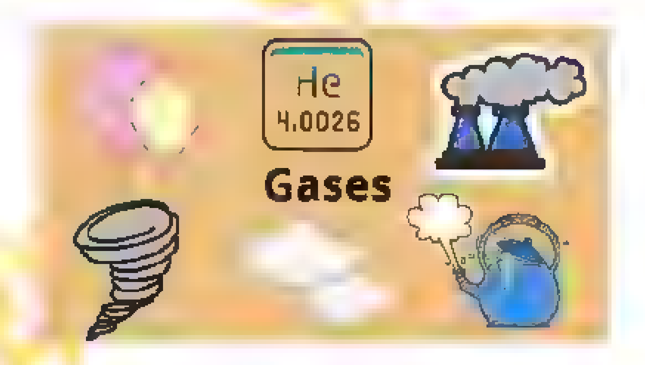
-Matter:

It is anything that has a mass and takes up space (has a volume)

States of water:

1-Gas state:

Such as: Air- Water vapor(steam)- Carbon dioxide- Oxygen



2-Solid state:

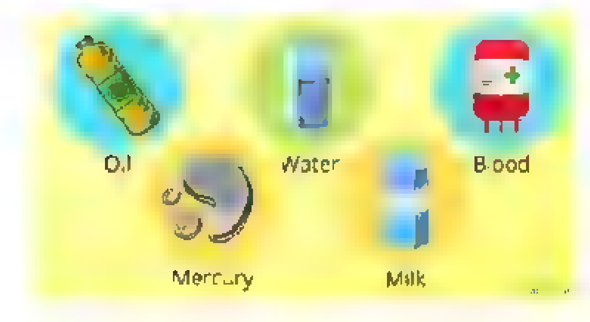
Such as: Ice- Gold- Wood





3- Liquid state:

Such as: Oli- Water- Milk- Vinegar



Note:

- Water can be found in the three state.
- Water can be change from one state to another

Worksheet (1):

Q.1- Write the scientific term of each of the following:

1. it is anything has mass and volume (..............................)

2-The state of water after its boiling (................................)

Q.2- Choose the correct answer:

1-Matter can be found in...............States.

a.8 b. 2 C.3 d.1

2- The amount of space that a matter takes up is called...........

a. volume b. mass c. area d. weight

3-Both .... and .... have the same state of matter

a. oil-plastic. b. wood-water. c. iron-milk. d. wood-plastic

4-water can be found in a solid state in the form of....................

a. sea water b. steam c. ice d. boiling water

Q.3-what happen if.........?

Water is frozen in the freezer (according to the state of water after freezing.

..



Lesson (2) Observing Matter

- Solids: Have definite (fixed) volume and shape.
- Liquids: Have definite volume but they don't have definite shape so, they take the shape of their containers.
- Gases: Definite no volume and shape, so they take the volume and shape of their containers.

Note :

- Some gases cannot be seen such as air but we can see air moving when the wind blows and moves some object
- And we can see a balloon gets larger when you blow air into it

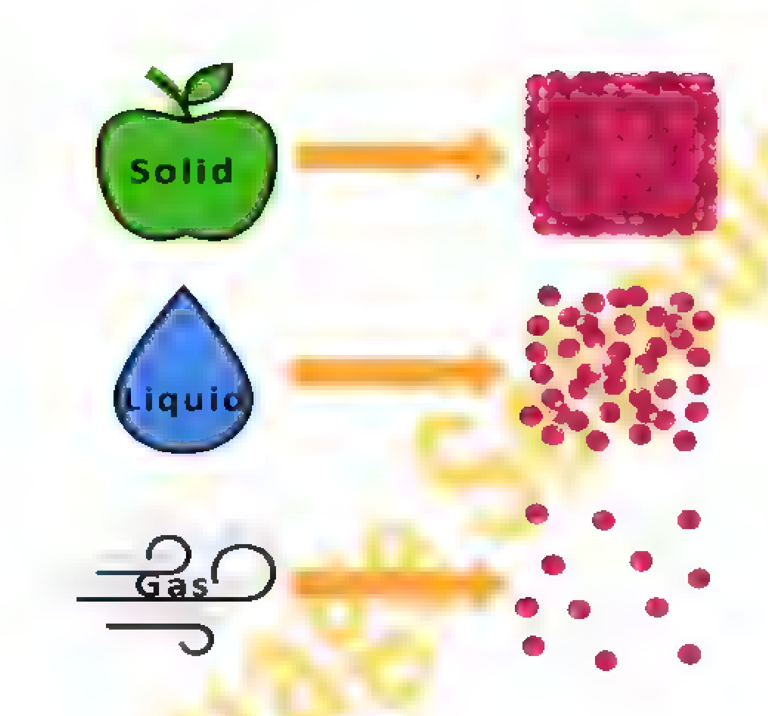
matter is some thing that we can

- Feel (air)
- See (ball)
- Smell (flower)

The particles of all Matter :

- all matter are made up of tiny things (particles) we cannot see with our eyes
- particles of all matter are in continuous motion
- some matter are too small to see with our eyes as air and germs but they also made up of tiny particles





1-Particles of solid matter:

- They are very close to each other (packed tightly).
- They have less energy.
- They move only a little bit.

2-Particles of liquid matter

- They have more spaces.
- They have more energy
- They can move more freely.

3-Particles of gases matter

- They have a lot of spaces.
- They have a lot of energy
- They move very freely

Measuring and observing matter

1. We can measure the length of some matter using ruler or measuring tape.
2. We can measure the mass of matter using a balance (scale.)
3. We can measure the temperature of some matter using thermometer

We can determine the state of matter by

1. Describing the properties of matter
2. The motion of particles of matter



Note: There are some things that are not matter as light and sound which are forms of energy.

Note: -

- Matter can change from one state to another such as from solid to liquid by melting, from liquid to solid by freezing.
- If there are two objects they cannot take up the same space at the same time

Worksheet (2)

Q.1-Give reasons for:

1- Oxygen has no definite shape or volume.

....

2- Stone has definite shape and volume.

....

3- Vinegar is a liquid matter.

....

Q.2-Put (✔) or (X) and correct the wrong one:

1. All forms of matter have volume.(   )

....

2. Liquids don't take the shape of the container that they are placed in. ( )

....

3 Both oil and wood have definite shape.(   )

....

4.On transferring water from one pot to another,its volume will change.(   )

....

5. Light and sound are forms of matter. (   )

....

Q.3- Choose from column (A) what suits it in column (B):

A	B
1. Gasoline 2. Carbon dioxide 3. Sand	a) Its particles have medium energy. ( ) b) Its particles are packed tightly. ( ) c) Its particles do not at all. ( ) d) Its particles move freely. ( )



Lesson (3)

➢Particles of Matter

You have learned that any matter is made up of tiny particles that we cannot see with our eyes, where :

• Particles are known as "the building units of matter".

• Normal microscopes help us see some particles of matter.

• Different kinds of matter are made of different kinds of particles such as :

- Particles of gold are different from particles of iron.

- Particles of water are different from particles of milk.

Now, let's study different kinds of particles.

➢ Particles of solids:

Particles of solids are closely packed (arranged) together and this leads to:

- Solids keep their shape.
- When they vibrate or move around their places, these particles are held together, so each particle cannot move separately from one place into another.
-They cannot slide over each other.

➢ Particles of liquids:

They are held more loosely, than particles of solids, so:

-They move faster than solid particles.

-They can slide over each other so, they take the shape of their containers













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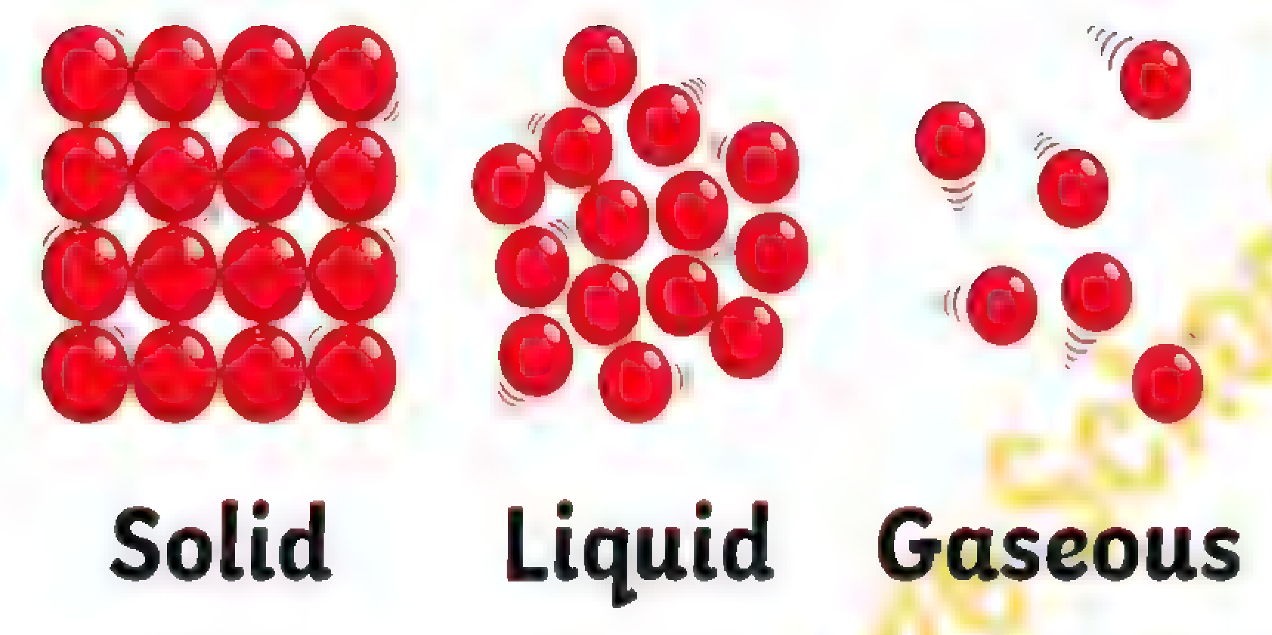
➢Particles of gases:

They are not held together, so:

-They move very quickly in all directions.

-they can spread out to fill up any container they put in.

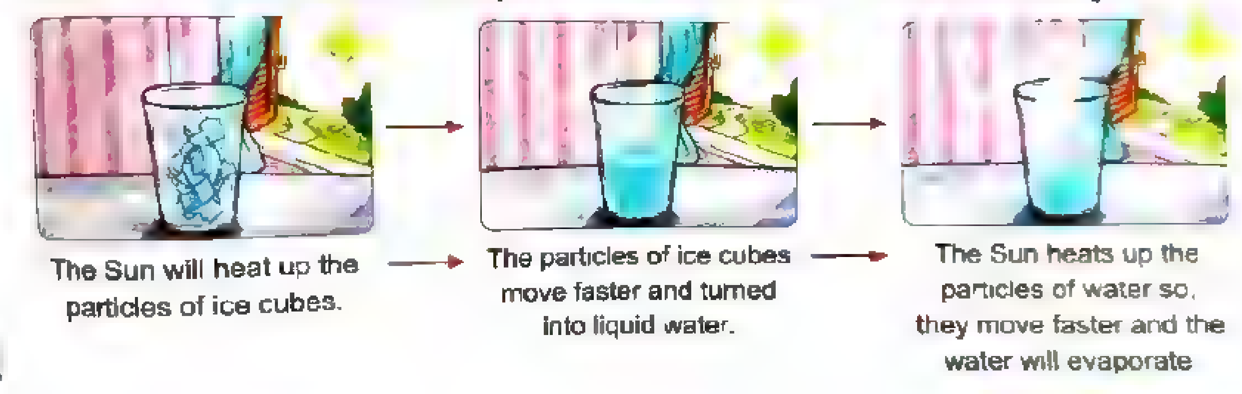




Modeling the particles of matter :

- Using model is away to some scientific concept than can make ideas more clear.

When a cup of ice cubes exposed to the Sun in a hot summer day :



Example.

- To make a model of particles that make up a matter, you can use ping pong balls as they are three dimensional units and can be separated from each other.

- You can use these balls to describe the movement of particles of the three states of matter.



Ping pong ball

Note:

- When you heat a solid matter ,the movement of its particles becomes faster.

- By heating a liquid matter it changes into gas matter.
- Particles of solid are organized and have a regular pattern.



The size of particles depends on :



1- The type of particles.
2- How particles connect each other.

To see the components of one particles such as

One blood cell, scientist cannot use the regular microscope , but the use special microscope

Called { ***Electron microscope***}


E ectron microscope

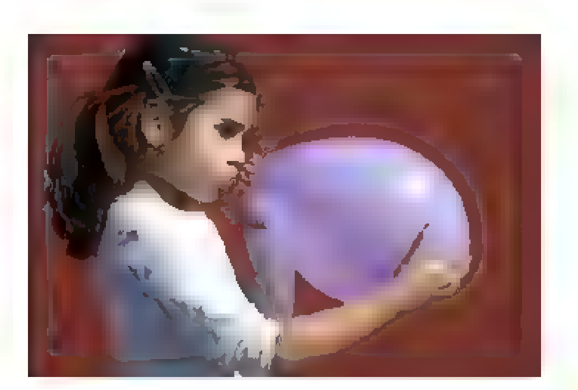
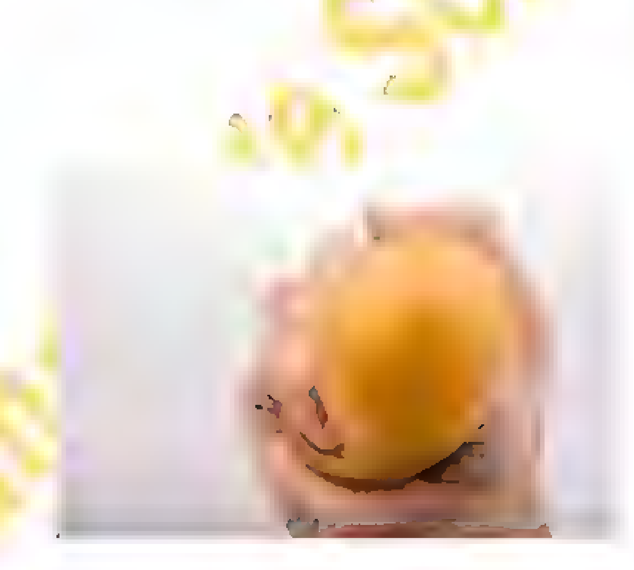
Note: Size of particles depend on :

1- The type of particles.
2- How particles connect with each other.

How can we show the particles exist ?

We can use gas matter such as air which is made of invisible tiny particles as follow:

When you blow up a balloon	When you squeeze a balloon

- The particles of air inside the balloon move very quickely - The particles of air hit and bounce the balloon frome inside,so they produce a force that inflates the ballon and gives it a round shape. 	- The particles come close together so ,the balloon becomes smaller - If you squeeze more on the ballon,it will pop and the particles of air inside the ballon will escape out into the air . 



Worksheet (3)

Q.1- Complete the following sentences:

1- ....are known as the building units of matter.
2- Particles of .... are held more loosely, than particles of solids.
3- The shape of .... do not have definite shape.
4- Matter is something that you can......................, ... and ....
5- Particles of ....move very quickly in all directions.

Q.2-What happens if.....?

Solid changes into liquid. (according to the speed of particles)

....

Q.3- Choose the correct answer :

1- By changing the ......of a matter, its state may change.

a. mass b. volume c. Color d.temperature

2. If water is exposed to high temperature,its paricles will move............,and the water may change into....

a. faster-ice. b. faster-water vapor. c. slower-ice d. slower-water vapor

3- We can use a model to study very large things sucn as

a. solar system. b. germs. c. microbes. d. viruses

4. By blowing up a balloon, ...

a. its volume decreases. b. its color changes. c. its volume increases.
d. its mass doesn't change.

5. To examine the structure of tiny particles of a matter, we can use....

a. ruler. b. balance. c. thermometers. d. microscopes.



Q.4Give reason for:

1- Some times we need to use an electron microscope.

……………………………………………………………………………………………………

2- Using model to study some scientific concept.

……………………………………………………………………………………………………





Lesson (4)

Models

Models help us understand things we cannot easily see such as :

- We cannot see the Earth which is too big while we are standing on it. But, we can observe and understand it using the model of globe shown the previous picture.

Model:

It is a copy that is similar to a real thing.

How model help us look at big things?

Example:

1. **The Earth :**



A globe represents a model of the Earth which shows us :

- The shape of the Earth
- How much of the Earth is covered with water.
where different countries are located.

2.The solar system :

Solar system is a very big place that consist of many planets such as earth and it help us to

1. **See all planets at once**
2. **Compare between plantes . which one is the biggest and which one is the closest to earth**



How model help us look at small things?



Models can represent very tiny thing in abigger size because It is hard to see them

Germs are very tiny and they are spread around us which make us sick

- A model of a germ helps us to :

- See the shape of a germ without microscope.

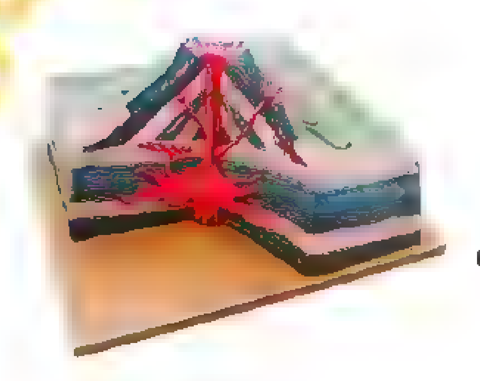
- See different parts of germs which help them to know how to spread from one person to another.

Models help us understand how thing work

Example : A model of a volcano:

A model of a volcano shows us :

- The shape of a volcano.



- How the liquid that comes out of a volcano during a real eruption.

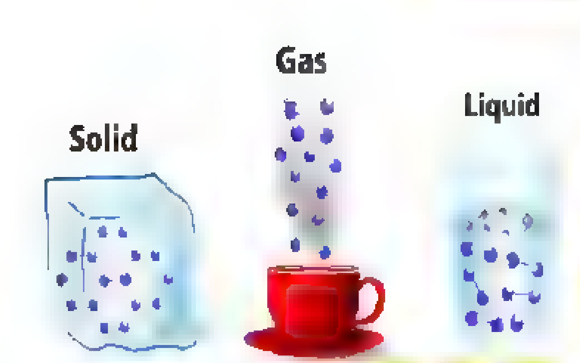
Example (2 :A model of an airplane

► From the previous explanation, it is clear that models help us :

- Teach something about the real things they copy.
- See and understand how things work.
- Learn about many things at just the right size.
- Know what we could not otherwise see.

Modeling States of Matter





The arrangement of particles in:

- Solid matter: They have a regular pattern (organized).
- Liquid matter: They have a random arrangement (not well organized).
- Gas matter: They have a random arrangement (not organized at all)

Worksheet (4)

Q.1) Choose the correct answer:

1. The model of the Earth shows how much of its surface is covered with ....

a. gasoline. b. water. c. milk. d. animals.

2. We can see all planets of the........... system including the Earth by using a model.

a. solar b. digestive c. respiratory d. muscular

3. Some liquids come out of a .... during its eruption.

a. star b. wooden piece c. volcano d. plastic piece

4. Particles of .... are organized and have a regular pattern.

a. solids only b. gases only c. solids and liquids d. liquids and gases

5. Gases differ from solids and liquids in that gases.......... .

a. can be poured. b. have a definite shape.

c. fill any container they are put in. d. have a definite volume.

Q.2) Write the scientific term of each of the following :



1- A model of the whole world that is made in the shape of a large ball (…………………………………)

2- A copy that is similar to a real thing which we cannot observe with our eyes. (……………………………….)

Q.3) Complete the following sentences :

1- Water vapor particles are loosely packed, so that water vapor do not have a definite ……………… or……………….

2- We can study the location of countries by using a ……………… which represents a model of the Earth.

3- Liquids that come out of a volcano have definite ……………… but they have no definite……………… .

Q.4) Give a reason for the following :

➢ Both liquids and gases don't have a definite shape and take the shape of their containers.

………

Q.5) What happens to ... ?

The arrangement of particles of water after its freezing.

………



EL MOTAMYEZ - SCIENCE Questions Bank

NOVEMBER REVISION

Question 01 Choose the correct answers

1. All of the following cause destroying the ecosystem except ....
   (a) gentle rain (b) heavy rain (c) drought (d) pollution
2. In marine food webs, ... are considered producers.
   (a) shark (b) algae (c) bacteria (d) small fish
3. Energy could be recycled back into the ecosystem by the ....
   (a) predators (b) prey (c) consumers (d) decomposers
4. All the following organisms can make their own food, except ....
   (a) grass (b) rabbit (c) algae (d) microorganisms
5. .... is an area in the ocean where the small pieces of coral are nurtured
   (a) Coral reef (b) Nursery (c) Protectorate (d) Garden
6. If the grass is removed from an ecosystem, ... will die first.
   (a) producers (b) primary consumers (c) secondary consumers (d) decomposers
7. coral reefs get harmed when ....
   (a) water temperature increase (b) ingest microplastic (c) fish take it as a shelter (d) a,b
8. Healthy habitats contain ....
   (a) food (b) water (c) Shelter (d) all the previous
9. All the following examples represent human bad activities, except ....
   (a) overfishing (b) pollution (c) floods (d) cutting trees
10. Food chain describe the way of transferring .... among living organisms in ecosystem
    (a) consumers (b) decomposers (c) producer (d) energy
11. Which of the following from human activities which harm marine ecosystem
    (a) Over fishing (b) leakage of oil into water (c) throw wastes in water (d) all the previous answers
12. .... is one of the ways done by coastal communities to reduce plastic pollution.
    (a) Replacing wooden forks with plastic ones (b) Using grocery plastic bags (c) Using single-use plastics (d) Using cloth bags

13. Which of the following represents the correct marine food chain?
   - a) Algae→coral→shark→parrotfish
   - b) Algae→shark→coral→parrotfish
   - c) Algae→shark→parrotfish→coral
   - d) Algae→coral→parrotfish→shark

14. When a predator feeds on a prey, ... is transferred between them
   - a) water
   - b) blood
   - c) motion
   - d) energy

15. .... live on the top of mountain cliffs and feed on small fish
   - a) Turtles
   - b) Corals
   - c) algae
   - d) Seabird

16. .... is/are considered as a top predator
   - a) tiger
   - b) rabbit
   - c) shark
   - d) a,c

17. In this food chain (Acacia Tree →Giraffe →Lion), the symbol →represents the transferring of ....
   - a) pollution
   - b) force
   - c) energy
   - d) motion

18. How are sol ids unique from other forms of matter?
   - a) Solids take the shape of any container.
   - b) Solids have a definite size and shape.
   - c) Solids can be poured
   - d) Solids fill whatever container they are put in

19. All matter is made of ....
   - a) molecules
   - b) proteins
   - c) cells
   - d) atoms

20. What makes gases different from other states of matter? Choose all that apply.
   - a) Gases can be poured.
   - b) Gases have a definite shape.
   - c) Gases fill the shape of any container they are put in.
   - d) Gases do not have a definite shape.

21. Which two properties of matter make it possible to make star-shaped ice cubes? Choose two answers.
   - a) Liquids take the shape of whatever container they are poured into
   - b) gases spread out to fill any container
   - c) Solids have a definite shape.
   - d) Gases have no definite shape.

22. Matter is ....?
   - a) Anything in the world.
   - b) anything that has mass and takes up space .
   - c) only water in different states
   - d) only solids .

23. How can a model be helpful?
   - a) Models give us step-by-step instructions about how to build something.
   - b) Models make something look better than it does in real life.
   - c) it is in real life.
   - d) Models can help us see things that are too small or too big to observe

24. According to hardness feathers are............
    (a) soft (b) hard (c) round (d) square

25. Ice is an example of ....state of water
    (a) solid (b) gas (c) liquid (d) a,b

26. .... has a definite size and no definite shape.
    (a) Air (b) Ice (c) Water (d) Wood

27. We can measure temperature by using ....
    (a) thermometer (b) scale (c) meter (d) measuring tab

28. All the following examples represent solid states, except ....
    (a) oil (b) book (c) humans (d) rocks

29. We can measure the weight using ....
    (a) measuring tape (b) scale (c) ruler (d) meter

30. During the eruption of ....lava come out
    (a) star (b) volcano (c) wooden piece (d) plastic piece

31. Which matter has a definite shape, definite volume?
    (a) Water (b) Ice (c) Oil (d) Air

32. All the following from properties of particles except..........
    (a) they are tiny (b) they can be seen by the eye (c) they are in continuous motion (d) they are identical

33. From the uses of models ....
    (a) they help us see and understand how things work.
    (b) they show us what we could not see
    (c) they are a great way to see many things at the right size.
    (d) all the previous

34. When you blow a balloon, ...
    (a) gas particles bounce against the inside of the balloon.
    (b) gas particles exert a force that creates Its round shape .
    (c) gas particles exert a force that inflates the balloon .
    (d) all the previous

Question 02 — PUT (√) OR (×)

1. Food webs show that many organisms share food resources within ecosystems. (   )
2. Fungi - bacteria are considered an example of consumers. (   )
3. Scavengers complete the decomposition process. (   )



4. Food web made up of 2 food chains or more. ( )
5. Scavengers come after decomposers in the food chain. ( )
6. Decomposers include snails, slugs and crabs. ( )
7. Decomposition process takes place on land and also underwater. ( )
8. If organisms disappear in the ecosystem, this may lead to the destroying the ecosystem. ( )
9. Top predator are consumers that exist at the top of food chains. ( )
10. Using wooden forks and cloth grocery bags increase the plastic pollution ( )
11. Seabirds feed on small fish to get energy. ( )
12. Using plastic bags is better than using cloth bags. ( )
13. Gentle rain cause floods and damage the desert ecosystem ( )
14. Microorganisms are producers in marine food chains ( )
15. The human land activities on land have no effect on the marine ecosystem. ( )
16. Algae is example of producers in desert ecosystems. ( )
17. If coral reefs are destroyed, many marine food chains will be destroyed ( )
18. Energy is transferred from prey to predators in any ecosystem. ( )
19. If producers disappear, consumer may die ( )
20. Recovering shelter and bringing back food resources help animals to survive ( )
21. Coral reefs are considered as living organisms ( )
22. Plastic pollution harm marine environments ( )
23. Restoration processes always take a little time ( )
24. Corals and sea urchin are examples of top predator in marine ecosystem ( )
25. When water temperatures decrease coral bleaching happens ( )
26. The particles in ice move more freely than in water. ( )
27. A solid keeps its shape when it is moved from one place to another. ( )
28. When you blow a balloon, gas particles exert a force that inflates the balloon. ( )
29. Water vapor is the solid state of water ( )



30. Matter exists everywhere around us in nature. ( )
31. All states of matter have the same properties ( )
32. In gas state, the particles can keep their shape. ( )
33. A liquid has a definite shape and volume. ( )
34. Some matter is very small that we can't see as germs ( )
35. Models help us see germs without a microscope ( )
36. Particles of gas packed tightly with the others ( )
37. Milk takes the shape of the container that it is poured in. ( )
38. All matter made up of large moving particles ( )
39. Water has no definite shape and size. ( )
40. Matter exists in four states ( )
41. Models are a great way to see many things at the right size. ( )
42. A solar system model tells us about planets which is the biggest and which one is closest to earth ( )
43. To show the particles of a gas, we stick the buttons with a very long distance between them. ( )
44. We can see particles inside matter with the naked eye ( )
45. To measure the tallness, we use scales ( )
46. Some particles are so small that normal microscopes cannot detect them. ( )
47. Models can be used to describe very small objects only ( )
48. Ice melts to water by heating ( )
49. The motion of particles in liquids is slower than that in solids. ( )
50. Gases are not matter because they are invisible. ( )

Question 03 Complete the following sentences using words between brackets

1. Sea birds feed on small fish, they build their nest (in water – on the top of mountain cliffs)
2. The main source of energy on the Earth, is............... (the sun - consumers)
3. ....of energy transfers between living organisms in a food web (100% - 10%)
4. .... has bad effect on marine life (Plastic – coral reefs)
5. If the climate is suitable, the population of a species will.......... (decrease - increase)

6. Coral reefs (filter – pollute) the sea water to get their food
7. When coral bleaching happen, coral reefs will ....
(die - grow healthy)
8. Water of lake (increase – decrease) during extreme hot climate
9. Habitat restoration projects (benefit – harm) the ecosystem
10. ......is from human activity which cause habitat loss
(add building and roads - recycle plastic)
11. The marine food web started with............ (algae - parrotfish)
12. .... can make their own food (fish – microorganisms)
13. If all producers die, rabbits will................ (die -not be affected)
14. Gentle rain........... desert ecosystem (harm – improve)
15. .... is one of the best ways to reduce plastic pollution in the ocean. (Throwing plastic in seas - Recycling plastics)
16. Habitat loss is one of the main causes of ....
(Increase the population- extinction)
17. ....of water temperature causes the migration of microorganisms to another habitat. (increasing – decreasing)
18. leakage of oil into the water (harm – protect) marine ecosystem
19. Pollution harms ecosystem and the number of living organisms
(decrease – increase)
20. When ice transfer from container (1) to different container (2) ,
the volume of ice will..........(increase - doesn't change)
21. Matter consists of identical .... in a state of motion.
(Particles – volume)
22. The model which shows us all the planets is called ....
(solar system model - germs)
23. In .... state, particles are very close to each other
(Solid – gas)
24. .... is the process of preserving vegetables to be fresh.
(Melting -Freezing)
25. All matter is made up of .... particles (tiny - large)
26. Matter can change from one state to another. (True – false)
27. In solid state, the particles ....
(Take the shape of their container - keep their shape)

28. A globe is a model that shows you ....
(the shape of Earth - the shape of the solar system)
29. The particles of .... state vibrate or move around its place
(liquid – solid)
30. In gas state particles move ....(slowly - quickly)
31. Scientists can use .... to see individual particles inside matter. (Magnifying lenses - electron microscopes)
32. .... is a substance that can be poured in any container.
(Juice - Ice)
33. .... model used to study very large things
(Germs - solar system)
34. Anything that has mass and occupies space is called ....
(energy - matter)
35. When ice cubes are exposed to heat, ...
(The particles move faster - the particles move slower)
36. The movement of particles of water are slower than that of......
(Wood- oxygen)
37. Which of the following matter has a no definite volume and shape? (Ice - Air)
38. Some matter is very small and we cannot see it, such as ....
(germs - pencils)
39. .... is used to measure the mass of objects
(measuring cup – balance)

Question 04 Complete The Following Sentences

1. Food web is a model that describes .... flow between living organisms in an ecosystem.
2. .... process is considered as a nature's recycling factory.
3. The sun is the source of ....
4. When number of secondary consumers decrease , the number of primary consumers .... and the amount of producers ....
5. When water becomes warm, ... will move to cooler water.
6. Heavy rain causes .... which destroys desert ecosystems.
7. When water becomes too warm, corals will get rid of the ...., the coral turns into .... colour in their tissues.



8. Some human activities such as................ and .... may affect marine environments.
9. .... transfer between animals in a food web to help them do their activities and survive
10. .... is an area that provides food, water and shelter to all living organisms which live in.
11. .... is the area in the ocean where the small pieces of coral are nurtured.
12. Coral reefs provide marine organisms with ....
13. In food chain energy transfer from producer to ....
14. You can use a ruler to measure the .... of your book
15. .... and .... are examples of gaseous states.
16. Matter can exist in................. states, that are .... – .... and gas .
17. .... is amount of space occupied by matter
18. Motion of particles in liquids is .... than that in solids.
19. Gases have .... shape, ... volume
20. Solids have .... shape, ... volume
21. In .... state the particles have a lot of energy and move very freely .
22. A model of a germ helps us to see its shape without using a .... which is used to magnify tiny objects.
23. Scientists use .... to see tiny particles.
24. Matter consists of very tiny ....

Question 05 — Write the scientific term for each of the following

1. It is a process through which humans make new products from waste materials instead of going into a landfill. ( )
2. They are organisms that break down the bodies of dead animals into small pieces. ( )
3. A natural process through which the nutrients found in dead organism's bodies return back to the ecosystem. ( )
4. It is a process through which decomposers can recycle elements back into the soil. ( )
5. A group of living organisms that complete the food chain cycle. ( )

6. A group of interconnected food chains. ( )
7. It is an area in the ocean where the small pieces of coral are nurtured until they can be moved back to the reefs. ( )
8. A human activity that affects marine food webs and cause decreasing the number of fish. ( )
9. Small pieces of plastic are formed due to the falling of the sun UV rays on it. ( )
10. It is the returning of the land and water back to how they were before harm was done. ( )
11. Small organisms live in cold cannot be seen by eyes considered as a producer in marine food web. ( )
12. Flying living organisms that build their nests on the top of mountain cliffs and feed on small fish. ( )
13. When water temperature rises up the coral reef turn completely into white. ( )
14. They are consumers that exist at the top of food chains. ( )
15. It is the number of organisms of one type of species living in an area. ( )
16. An example of producers in the marine ecosystem. ( )
17. Sun rays that break down plastic forming microplastic. ( )
18. living organisms that return the energy back into the ecosystem. ( )
19. Any change in numbers of organisms of one type of species. ( )
20. They are consumers that feed on secondary consumers. ( )
21. It is a model shows different feeding relationships among living organisms. ( )
22. The state of matter that keep its shape and its particles packed tightly. ( )
23. The state of matter in which particles have a lot of energy and move very freely. ( )
24. A model of the whole world that is made in the shape of a large ball. ( )
25. The state of matter that has fixed shape and volume. ( )

26. It is a copy that is similar to the real thing. ( )
27. A state of matter that can be poured in a container and take its shape. ( )
28. A process in which ice changes into water. ( )
29. A tool is used to measure the length of wall or room ( )
30. A process in which water changes into ice. ( )
31. State of matter which vibrate or move around their place ( )
32. State of matter that has definite volume, no definite shape ( )
33. State of matter that has no definite shape and volume ( )
34. The building unit of matter. ( )
35. It is a measure of the amount of matter. ( )
36. The state of matter in which the particles are packed in a neat arrangement ( )
37. A tool (device) used to see tiny particle such as a germs ( )
38. The state of water when its temperature between 0°C and 100°C. ( )
39. The state of matter in which particles spread out and escape quickly ( )
40. The property of matter which is measured by the measuring cup. ( )
41. A device that is used to measure the mass of apples. ( )
42. It is anything that has mass and takes up space. ( )
43. The property of matter which is measured by the balance. ( )
44. A process that keeps vegetables fresh and ready to use for longer periods of time. ( )

Question 08 — Give reason for each of the following

1. Scavengers come after decomposers in the food chain

....

2. Soil fertility depends on decomposers.

....

3. Decomposers have great importance

....

4. Gentle rains cause a healthy ecosystem.

....

5. Fire forest has negative effect on living organisms

....

6. Microplastics have a bad effect on corals.

....

7. Heavy rains cause an unhealthy ecosystem.

....

8. Plastics are so harmful for marine ecosystems.

....

9. The nursery plays an important role in the recovery of coral reefs

....

10. Coral reefs are important for marine organisms and human.

....

11. Air is matter.

....

12. Book has definite shape and definite volume.

....

13. Wood is solid matter

....

14. Milk is considered as a liquid

....

15. Gases can escape into space.

....

16. Steam is gas state.

....

17. Water vapor has no definite shape or volume

....

18. Solid particles can keep their shape.

....

19. Chef put vegetables in a freezer or a refrigerator.

....



Question 07 — What happens if .... ?

1. If an organism in an ecosystem disappears

....

2. Absence of all decomposers from an ecosystem.

....

3. Grass disappears from an ecosystem.
(Concerning the primary and secondary consumers).

....

4. When temperature of water contain microorganisms increases

....

5. The number of one species increases a lot.
(Concerning food resources).

....

6. When the grass removed from ecosystem

....

7. Adding a road in the forest for moving cars.

....

8. There are many top predators in a food web. (Concerning the number of prey).

....

9. The water becomes warm (Concerning corals and microorganisms).

....

10. Gentle rains fall on the desert.

....

11. Sun UV rays fall on plastics for a period of time.

....

12. Heavy rains fall on the desert

....

13. The amount of plastics in water rises.

....

14. When small lakes exposed to extreme hot climate

....

15. When ice cubes exposed to heat (concerning the state and the speed of particles)

....

16. Boiling water for long time

....

17. You squeeze a balloon too hard.

....

Question 08 choose from column (B) what suits it in column (A)

1

	(A)		(B)
1	Photosynthesis process	a	It is a process through which humans make new products from waste materials.
2	Decomposition process	b	it is a process in which the nutrients are returned to the ecosystem.
3	Recycling	c	it is a process through which producers can make their own food.

2

	(A)		(B)
1	Decomposers	a	They are organisms that break down the bodies of dead animals into small pieces.
2	Scavengers	b	Made up of several interconnected food chains.
3	Food web	c	A group of living organisms that complete the food chain cycle.

3

	(A)		(B)
1	Microorganisms	a	It means the increase or decrease in the number of one species in any area.
2	Population Change	b	They are small plastic pieces are even smaller than a grain of rice.
3	Microplastics	c	is a producer in the marine food web.

4

	(A)		(B)
1	Habitat	a	Is one of the main causes of extinction.
2	nursery	b	the environment that the living organism lives in.
3	habitat loss	c	It is an area in the ocean where the small pieces of coral are nurtured .

5

(A)		(B)	
1	Coral bleaching	a	can make their own food.
2	Seabirds	b	means the coral turns into white.
3	Microorganisms	c	may cause extinction of animals.
4	Habitat Loss	d	dive to search for food.

6

(A)		(B)	
1	drought	a	desert ecosystem might get better.
2	gentle rain in the desert,	b	lead to floods.
3	heavy rain in the desert	c	ecosystem might destroy.

7

(A)		(B)	
1	oxygen	a	solid state
2	desk	b	liquid state
3	juice	c	gas state

8

(A)		(B)	
1	matter	a	is a copy that is similar to the real thing help us to understand things we cannot see easily.
2	temperature	b	it is anything that has a mass and takes up space.
3	model	c	from properties of matter that used to measure how hot or cold the matter is.

9

(A)		(B)	
1	Thermometer	a	is used to measure height
2	Balance	b	is used to measure temperature
3	Measuring tape	c	is used to measure mass





	(A)		(B)
1	Matter	a	is a form of energy.
2	Particles	b	is gas state
3	Sound	c	are in continuous motion inside the matter.
4	Oxygen	d	is anything that has mass and occupies space



	(A)		(B)
1	Electron microscope	a	is used to see the individual particles.
2	Globe	b	shows us Earth only.
3	Solar system model	c	shows us all the planets.

12

	(A)		(B)
1	Ice	a	takes the shape of container, can flow, and particles are not so near.
2	Water	b	has fixed shape, and particles are very near each other.
3	Water vapor	c	does not have a fixed shape, takes up all the space of the container and the particles are far from each other.

13

	(A)		(B)
1		a	solid state
2		b	liquid state
3		c	gas state

Question 08 Complete the following using words between brackets



(energy -pollution – sea birds – coral bleaching)

1. When water temperatures rise .... happens
2. Throwing plastic wastes into a river causes water ....
3. When predator feed on prey , predator get ....from prey
4. ....dive deep down into the sea to feed on small fish

2

(Smoke – cold – pollution – die – ash)

1. Microorganisms live in ....water .
2. If the grass removed from ecosystem, primary consumers that feed on plants will ....
3. ....is the harm that happen to air , soil and water due to human bad activities .
4. ....and....................produced from burning forest cause pollution which harm animals .

3

(sun light– flood – small fish -producer – tertiary consumer)

1. Heavy rain in the desert lead to ....which harm ecosystem
2. ....feed on microorganisms floating on the surface of the sea.
3. Microorganisms are considered as a ....living organisms .
4. Microplastic form from broken down of plastic by UV rays of ....
5. the secondary consumer is considered as prey for ....

4

(Measuring tape – solid – mass – liquid)

1. In ....state the particles are packed tightly with the others
2. ....is state of matter that can be poured and take the shape of container .
3. Matter is anything that has ....and occupies space.
4. You can use ....to measure the length of a table .



5

(globe – gas – force – solar system – volcano model)

1. When you blow a balloon, gas particles exert ....that inflates the balloon.
2. The volume and shape change in ....state .
3. .... model shows us all the planets, while ....model shows us Earth only.
4. ....ooze liquid to model what happens during a real eruption.

6

(Solid – gas – electron microscope – earth)

1. The particles inside a ....matter move very freely.
2. A globe is a model of......................
3. ....matter has definite shape and volume .
4. Scientists can use special microscopes called ....to see individual particles.

Question 10 **Answer the following questions**

1. **(Seabirds -microorganisms – small fish)**

   A - Rearrange to form a correct food chain.

   ....

   B - Which of these organisms considered as a producer

   ....

2. Rearrange these organisms to make a correct food chain:

   (a) Snake – Grass – Hawk – Rabbit

   ....

   (b) Parrotfish – Algae – Shark – Coral

   ....

   (c) sea star – algae – shark - clam

   ....

3. Cross out the odd word:

   (a)- Oil – Milk – book – Tea

   (b) - Air – Water vapor – Ice – Carbon dioxide

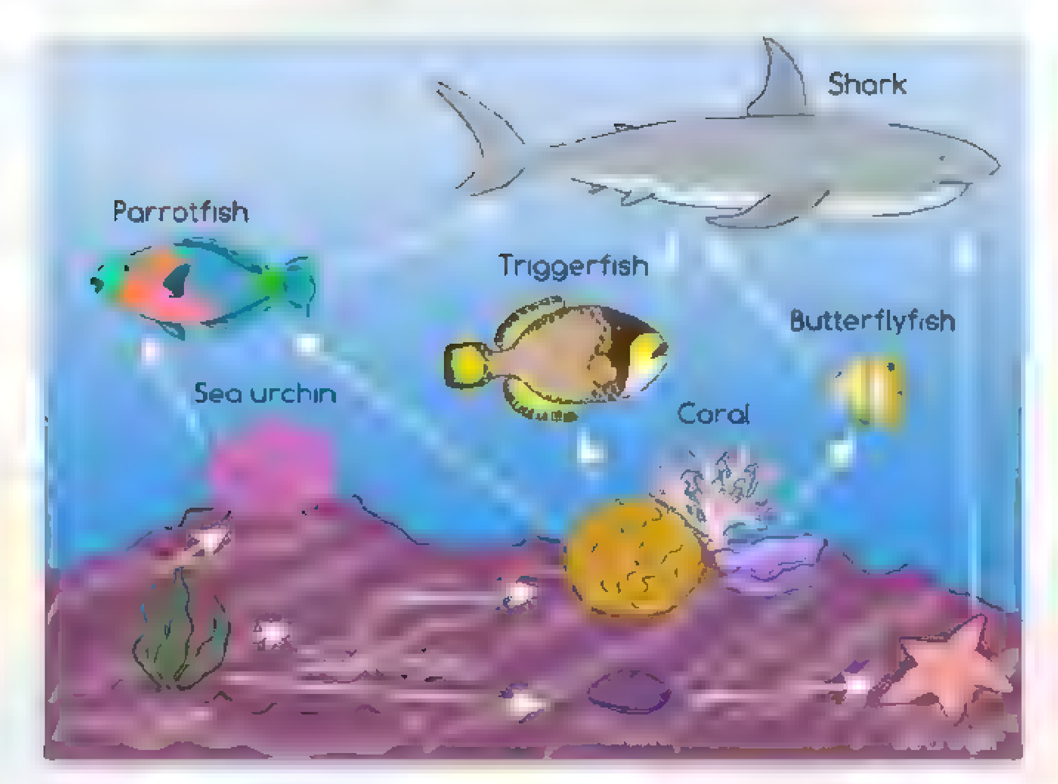
   (c) - Water – Air – Light – Wood

4 Classify the following materials in the following table into solids, liquids and gases:

(Desk – oil– juice –steam – salt – pencil – air -Book - Smoke – Milk – Gold – Human – Rock – Oxygen)

	solid	liquid	gas
Examples			

5 Study the following figure then answer the questions :



a. This figure represents........................ ecosystem .

b. .... is considered as a producer .

c. energy transfer when shark feed on ....

أنتهت الأسئلة مع أطيب الامنيات بالنجاح والتوفيق

Answers



EL MOTAMYEZ - SCIENCE Questions Bank

NOVEMBER REVISION

Question 01 Choose the correct answers

1. All of the following cause destroying the ecosystem except ....
   - (a) gentle rain
   - (b) heavy rain
   - (c) drought
   - (d) pollution
2. In marine food webs, ... are considered producers.
   - (a) shark
   - (b) algae
   - (c) bacteria
   - (d) small fish
3. Energy could be recycled back into the ecosystem by the ....
   - (a) predators
   - (b) prey
   - (c) consumers
   - (d) decomposers
4. All the following organisms can make their own food, except ....
   - (a) grass
   - (b) rabbit
   - (c) algae
   - (d) microorganisms
5. .... is an area in the ocean where the small pieces of coral are nurtured
   - (a) Coral reef
   - (b) Nursery
   - (c) Protectorate
   - (d) Garden
6. If the grass is removed from an ecosystem, ... will die first.
   - (a) producers
   - (b) primary consumers
   - (c) secondary consumers
   - (d) decomposers
7. coral reefs get harmed when ....
   - (a) water temperature increase
   - (b) ingest microplastic
   - (c) fish take it as a shelter
   - (d) a,b
8. Healthy habitats contain ....
   - (a) food
   - (b) water
   - (c) Shelter
   - (d) all the previous
9. All the following examples represent human bad activities, except ....
   - (a) overfishing
   - (b) pollution
   - (c) floods
   - (d) cutting trees
10. Food chain describe the way of transferring .... among living organisms in ecosystem
    - (a) consumers
    - (b) decomposers
    - (c) producer
    - (d) energy
11. Which of the following from human activities which harm marine ecosystem
    - (a) Over fishing
    - (b) leakage of oil into water
    - (c) throw wastes in water
    - (d) all the previous answers
12. .... is one of the ways done by coastal communities to reduce plastic pollution.
    - (a) Replacing wooden forks with plastic ones
    - (b) Using grocery plastic bags
    - (c) Using single-use plastics
    - (d) Using cloth bags

13. Which of the following represents the correct marine food chain?
 (a) Algae→coral→shark→parrotfish (b) Algae→shark→coral→parrotfish
 (c) Algae→shark→parrotfish→coral (d) Algae→coral→parrotfish→shark

14. When a predator feeds on a prey, ... is transferred between them
 (a) water (b) blood (c) motion (d) energy

15. .... live on the top of mountain cliffs and feed on small fish
 (a) Turtles (b) Corals (c) algae (d) Seabird

16. .... is/are considered as a top predator
 (a) tiger (b) rabbit (c) shark (d) a.c

17. In this food chain (Acacia Tree →Giraffe →Lion), the symbol →represents the transferring of ....
 (a) pollution (b) force (c) energy (d) motion

18. How are sol ids unique from other forms of matter?
 (a) Solids take the shape of any container.
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19. All matter is made of ....
 (a) molecules (b) proteins (c) cells (d) atoms

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 (b) Models make something look better than it does in real life.
 (c) it is in real life.
 (d) Models can help us see things that are too small or too big to observe

24. According to hardness feathers are............
   a. soft   b. hard   c. round   d. square

25. Ice is an example of ....state of water
   a. solid   b. gas   c. liquid   d. a,b

26. .... has a definite size and no definite shape.
   a. Air   b. Ice   c. Water   d. Wood

27. We can measure temperature by using ....
   a. thermometer   b. scale   c. meter   d. measuring tab

28. All the following examples represent solid states, except ....
   a. oil   b. book   c. humans   d. rocks

29. We can measure the weight using ....
   a. measuring tape   b. scale   c. ruler   d. meter

30. During the eruption of ....lava come out
   a. star   b. volcano   c. wooden piece   d. plastic piece

31. Which matter has a definite shape, definite volume?
   a. Water   b. Ice   c. Oil   d. Air

32. All the following from properties of particles except..........
   a. they are tiny   b. they can be seen by the eye   c. they are in continuous motion   d. they are identical

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   b. they show us what we could not see
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   a. gas particles bounce against the inside of the balloon.
   b. gas particles exert a force that creates its round shape .
   c. gas particles exert a force that inflates the balloon .
   d. all the previous

Question 02 — PUT (√) OR (×)

1. Food webs show that many organisms share food resources within ecosystems. ✓
2. Fungi - bacteria are considered an example of consumers. ✗
3. Scavengers complete the decomposition process. ✗

4. Food web made up of 2 food chains or more. ✓
5. Scavengers come after decomposers in the food chain. ✗
6. Decomposers include snails, slugs and crabs. ✓
7. Decomposition process takes place on land and also underwater. ✓
8. If organisms disappear in the ecosystem, this may lead to the destroying the ecosystem. ✓
9. Top predator are consumers that exist at the top of food chains. ✓
10. Using wooden forks and cloth grocery bags increase the plastic pollution ✗
11. Seabirds feed on small fish to get energy. ✓
12. Using plastic bags is better than using cloth bags. ✗
13. Gentle rain cause floods and damage the desert ecosystem ✗
14. Microorganisms are producers in marine food chains ✓
15. The human land activities on land have no effect on the marine ecosystem. ✗
16. Algae is example of producers in desert ecosystems. ✗
17. If coral reefs are destroyed, many marine food chains will be destroyed ✓
18. Energy is transferred from prey to predators in any ecosystem. ✓
19. If producers disappear, consumer may die ✓
20. Recovering shelter and bringing back food resources help animals to survive ✓
21. Coral reefs are considered as living organisms ✓
22. Plastic pollution harm marine environments ✓
23. Restoration processes always take a little time ✗
24. Corals and sea urchin are examples of top predator in marine ecosystem ✗
25. When water temperatures decrease coral bleaching happens ✗
26. The particles in ice move more freely than in water. ✗
27. A solid keeps its shape when it is moved from one place to another. ✓
28. When you blow a balloon, gas particles exert a force that inflates the balloon. ✓
29. Water vapor is the solid state of water ✗



No.	Statement	Answer
30	Matter exists everywhere around us in nature.	✓
31	All states of matter have the same properties	✗
32	In gas state, the particles can keep their shape.	✗
33	A liquid has a definite shape and volume.	✗
34	Some matter is very small that we can't see as germs	✓
35	Models help us see germs without a microscope	✓
36	Particles of gas packed tightly with the others	✗
37	Milk takes the shape of the container that it is poured in.	✓
38	All matter made up of large moving particles	✗
39	Water has no definite shape and size.	✗
40	Matter exists in four states	✗
41	Models are a great way to see many things at the right size.	✗
42	A solar system model tells us about planets which is the biggest and which one is closest to earth	✓
43	To show the particles of a gas, we stick the buttons with a very long distance between them.	✓
44	We can see particles inside matter with the naked eye	✗
45	To measure the tallness, we use scales	✗
46	Some particles are so small that normal microscopes cannot detect them.	✓
47	Models can be used to describe very small objects only	✗
48	Ice melts to water by heating	✓
49	The motion of particles in liquids is slower than that in solids.	✗
50	Gases are not matter because they are invisible.	✗

Question 03 — Complete the following sentences using words between brackets

1. Sea birds feed on small fish, they build their nest (in water – on the top of mountain cliffs)
2. The main source of energy on the Earth, is............... (the sun - consumers)
3. ....of energy transfers between living organisms in a food web (100% - 10%)
4. .... has bad effect on marine life (Plastic – coral reefs)
5. If the climate is suitable, the population of a species will.......... (decrease - increase)



6. Coral reefs (filter – pollute) the sea water to get their food
7. When coral bleaching happen, coral reefs will .... (die - grow healthy)
8. Water of lake (increase – decrease) during extreme hot climate
9. Habitat restoration projects (benefit – harm) the ecosystem
10. ......is from human activity which cause habitat loss (add building and roads - recycle plastic)
11. The marine food web started with............ (algae - parrotfish)
12. .... can make their own food (fish – microorganisms)
13. If all producers die, rabbits will................ (die -not be affected)
14. Gentle rain........... desert ecosystem (harm – improve)
15. .... is one of the best ways to reduce plastic pollution in the ocean. (Throwing plastic in seas - Recycling plastics)
16. Habitat loss is one of the main causes of .... (Increase the population- extinction)
17. ....of water temperature causes the migration of microorganisms to another habitat. (increasing – decreasing)
18. leakage of oil into the water (harm – protect) marine ecosystem
19. Pollution harms ecosystem and the number of living organisms (decrease – increase)
20. When ice transfer from container (1) to different container (2) , the volume of ice will..........(increase - doesn't change)
21. Matter consists of identical .... in a state of motion. (Particles – volume)
22. The model which shows us all the planets is called .... (solar system model - germs)
23. In .... state, particles are very close to each other (Solid – gas)
24. .... is the process of preserving vegetables to be fresh. (Melting -Freezing)
25. All matter is made up of .... particles (tiny - large)
26. Matter can change from one state to another. (True – false)
27. In solid state, the particles .... (Take the shape of their container - keep their shape)

28. A globe is a model that shows you ....
(the shape of Earth - the shape of the solar system)

29. The particles of .... state vibrate or move around its place
(liquid – solid)

30. In gas state particles move ....(slowly - quickly)

31. Scientists can use .... to see individual particles inside matter. (Magnifying lenses - electron microscopes)

32. .... is a substance that can be poured in any container.
(Juice - Ice)

33. .... model used to study very large things
(Germs - solar system)

34. Anything that has mass and occupies space is called ....
(energy - matter)

35. When ice cubes are exposed to heat, ...
(The particles move faster - the particles move slower)

36. The movement of particles of water are slower than that of......
(Wood- oxygen)

37. Which of the following matter has a no definite volume and shape? (Ice - Air)

38. Some matter is very small and we cannot see it, such as ....
(germs - pencils)

39. .... is used to measure the mass of objects
(measuring cup – balance)

Question 04 Complete The Following Sentences

1. Food web is a model that describes energy flow between living organisms in an ecosystem.
2. Decomposition process is considered as a nature's recycling factory.
3. The sun is the source of Energy – light – warm .
4. When number of secondary consumers decrease , the number of primary consumers Increase and the amount of producers decrease
5. When water becomes warm, microorganism will move to cooler water.
6. Heavy rain causes flooding which destroys desert ecosystems.
7. When water becomes too warm, corals will get rid of the algae, the coral turns into white colour in their tissues.



8. Some human activities such as overfishing and ocean pollution may affect marine environments.
9. Energy transfer between animals in a food web to help them do their activities and survive
10. Ecosystem is an area that provides food, water and shelter to all living organisms which live in.
11. Nursery is the area in the ocean where the small pieces of coral are nurtured.
12. Coral reefs provide marine organisms with food – shelter
13. In food chain energy transfer from producer to consumer
14. You can use a ruler to measure the length of your book
15. Air – oxygen and water vapor are examples of gaseous states.
16. Matter can exist in three states, that are solid – liquid and gas .
17. Volume is amount of space occupied by matter
18. Motion of particles in liquids is faster than that in solids.
19. Gases have no definite shape, no definite volume
20. Solids have definite shape, definite volume
21. In gas state the particles have a lot of energy and move very freely .
22. A model of a germ helps us to see its shape without using a Microscope which is used to magnify tiny objects.
23. Scientists use microscope to see tiny particles.
24. Matter consists of very tiny identical particles

Question 05 Write the scientific term for each of the following

1	It is a process through which humans make new products from waste materials instead of going into a landfill.	recycling process
2	They are organisms that break down the bodies of dead animals into small pieces.	scavengers
3	A natural process through which the nutrients found in dead organism's bodies return back to the ecosystem.	decomposition process
4	It is a process through which decomposers can recycle elements back into the soil.	Decomposition process
5	A group of living organisms that complete the food chain cycle.	Decomposers

No.	Statement	Answer
6	A group of interconnected food chains.	food web
7	It is an area in the ocean where the small pieces of coral are nurtured until they can be moved back to the reefs.	The nursery
8	A human activity that affects marine food webs and cause decreasing the number of fish.	Over fishing
9	Small pieces of plastic are formed due to the falling of the sun UV rays on it.	Microplastics
10	It is the returning of the land and water back to how they were before harm was done.	Restoration project
11	Small organisms live in cold cannot be seen by eyes considered as a producer in marine food web.	microorganism
12	Flying living organisms that build their nests on the top of mountain cliffs and feed on small fish.	Sea birds
13	When water temperature rises up the coral reef turn completely into white.	Coral bleaching
14	They are consumers that exist at the top of food chains.	Top predator
15	It is the number of organisms of one type of species living in an area.	population
16	An example of producers in the marine ecosystem.	Green algae (or) microorganism
17	Sun rays that break down plastic forming microplastic.	UV rays
18	living organisms that return the energy back into the ecosystem.	Decomposers
19	Any change in numbers of organisms of one type of species.	population change
20	They are consumers that feed on secondary consumers.	tertiary consumers
21	It is a model shows different feeding relationships among living organisms.	food web
22	The state of matter that keep its shape and its particles packed tightly.	Solid state
23	The state of matter in which particles have a lot of energy and move very freely.	gas state
24	A model of the whole world that is made in the shape of a large ball.	Globe
25	The state of matter that has fixed shape and volume.	Solid state

No.	Statement	Answer
26	It is a copy that is similar to the real thing.	Model
27	A state of matter that can be poured in a container and take its shape.	liquid
28	A process in which ice changes into water.	Melting
29	A tool is used to measure the length of wall or room	Tap measure
30	A process in which water changes into ice.	Freezing
31	State of matter which vibrate or move around their place	solid state
32	State of matter that has definite volume, no definite shape	liquid state
33	State of matter that has no definite shape and volume	gas state
34	The building unit of matter.	particles
35	It is a measure of the amount of matter.	mass
36	The state of matter in which the particles are packed in a neat arrangement	solid
37	A tool (device) used to see tiny particle such as a germs	Electron microscope
38	The state of water when its temperature between 0°C and 100°C.	liquid state
39	The state of matter in which particles spread out and escape quickly	gas
40	The property of matter which is measured by the measuring cup.	Volume
41	A device that is used to measure the mass of apples.	Scale - Balance
42	It is anything that has mass and takes up space.	Matter
43	The property of matter which is measured by the balance.	Mass
44	A process that keeps vegetables fresh and ready to use for longer periods of time.	Freezing

Question 08 — Give reason for each of the following

1. Scavengers come after decomposers in the food chain
   Because scavengers feed on dead bodies by breaking them into small pieces .

Soil fertility depends on decomposers.



2. Because decomposer recycles nutrients back into the soil.
3. Decomposers have great importance
   Because it recycles nutrients back into the ecosystem – increase soil fertility.
4. Gentle rains cause a healthy ecosystem.
   Because gentle rain benefit. producers (let grass grow) .
5. Fire forest has negative effect on living organisms
   Fire forest produce smoke which causes difficulty breathing
6. Microplastics have a bad effect on corals.
   Corals filter sea water to get food, during eating it ingests microplastics which is toxic.
7. Heavy rains cause an unhealthy ecosystem.
   Because heavy rain leads to floods.
8. Plastics are so harmful for marine ecosystems.
   Because plastic is toxic and sharp.
9. The nursery plays an important role in the recovery of coral reefs
   In nursery small pieces of corals are nurtured and produce healthy coral can grow – reproduce to make a thriving reef again.
10. Coral reefs are important for marine organisms and human.
    Coral reef provide food and shelter for marine organisms, and important for tourism (fishing or diving).
11. Air is matter.
    Because it has a mass and take a space.
12. Book has definite shape and definite volume.
    because wood is solid.
13. Wood is solid matter
    Because wood has definite shape, definite volume.
14. Milk is considered as a liquid
    Because it has a definite volume and no definite shape.
15. Gases can escape into space.
    Because gas has no definite shape and volume and its particles are not held together, move very quickly .
16. Steam is gas state.
    Because it has no definite shape or volume.
17. Water vapor has no definite shape or volume
    Because water vapor is gas.

18. Solid particles can keep their shape.
Because its particles are very. close to each other

19. Chef put vegetables in a freezer or a refrigerator.
To freeze it and to keep them fresh for longer time.

Question 07 What happens if .... ?

1. If an organism in an ecosystem disappears
The food web will be affected.

2. Absence of all decomposers from an ecosystem.
Dead organisms will not be decomposed and their nutrients will not return back to the soil.

3. Grass disappears from an ecosystem.
(Concerning the primary and secondary consumers).
Primary consumers will die quickly, secondary consumers will migrate

4. When temperature of water contain microorganisms increases
microorganisms and fish that feed on it will move away to a cooler water

5. The number of one species increases a lot.
(Concerning food resources).
Food resources will disappear they will not find enough food to eat so they will die

6. When the grass removed from ecosystem
Primary consumers that feed on plants die quickly

7. Adding a road in the forest for moving cars.
It causes habitat loss

8. There are many top predators in a food web. (Concerning the number of prey).
Ecosystems get harmed because predators eat all prey

9. The water becomes warm (Concerning corals and microorganisms).
Coral get rid of algae, coral color turn to white, microorganisms will move to cool water

10. Gentle rains fall on the desert.
Grass will grow (healthy ecosystem)

11. Sun UV rays fall on plastics for a period of time.
microplastic will be formed

12. Heavy rains fall on the desert
lead to floods

13. The amount of plastics in water rises.
Causes plastic pollution which harm the marine organisms because plastic is toxic and sharp

14. When small lakes exposed to extreme hot climate
The water in lake will evaporate and the lake may completely disappear

15. When ice cubes exposed to heat (concerning the state and the speed of particles)
It will melt Speed of particles will increase and change from solid state to liquid state

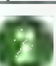
16. Boiling water for long time
It will evaporate (change from liquid state to gas state)

17. You squeeze a balloon too hard.
The balloon pops and the gas particles escape into the air

Question 08 choose from column (B) what suits it in column (A)



	(A)		(B)	
1	Photosynthesis process	a	It is a process through which humans make new products from waste materials.	1 - c
2	Decomposition process	b	it is a process in which the nutrients are returned to the ecosystem.	2 - b
3	Recycling	c	it is a process through which producers can make their own food.	3 - a



	(A)		(B)	
1	Decomposers	a	They are organisms that break down the bodies of dead animals into small pieces.	1 c
2	Scavengers	b	Made up of several interconnected food chains.	2 - a
3	Food web	c	A group of living organisms that complete the food chain cycle.	3 - b

3

	(A)		(B)	
1	Microorganisms	a	It means the increase or decrease in the number of one species in any area.	1 - c
2	Population Change	b	They are small plastic pieces are even smaller than a grain of rice.	2 - a
3	Microplastics	c	is a producer in the marine food web.	3 - b

4

	(A)		(B)	
1	Habitat	a	Is one of the main causes of extinction.	1 - b
2	nursery	b	the environment that the living organism lives in.	2 - c
3	habitat loss	c	It is an area in the ocean where the small pieces of coral are nurtured .	3 - a

5

	(A)		(B)	
1	Coral bleaching	a	can make their own food.	1 b
2	Seabirds	b	means the coral turns into white.	2 - d
3	Microorganisms	c	may cause extinction of animals.	3 - a
4	Habitat Loss	d	dive to search for food.	4 - c

6

	(A)		(B)	
1	drought	a	desert ecosystem might get better.	1-c
2	gentle rain in the desert,	b	lead to floods.	2-a
3	heavy rain in the desert	c	ecosystem might destroy.	3-b

7

	(A)		(B)	
1	oxygen	a	solid state	1-c
2	desk	b	liquid state	2-a
3	juice	c	gas state	3-b

8

	(A)		(B)	
1	matter	a	is a copy that is similar to the real thing help us to understand things we cannot see easily	1- b
2	temperature	b	it is anything that has a mass and takes up space.	2- c
3	model	c	from properties of matter that used to measure how hot or cold the matter is.	3- a

9

	(A)		(B)	
1	Thermometer	a	is used to measure height	1 - b
2	Balance	b	is used to measure temperature	2 - c
3	Measuring tape	c	is used to measure mass	3 - a

10

	(A)		(B)	
1	Matter	a	is a form of energy.	1-d
2	Particles	b	is gas state	2-c
3	Sound	c	are in continuous motion inside the matter.	3-a
4	Oxygen	d	is anything that has mass and occupies space	4-b

11

	(A)		(B)	
1	Electron microscope	a	is used to see the individual particles.	1 - a
2	Globe	b	shows us Earth only.	2 - b
3	Solar system model	c	shows us all the planets.	3 - c

12

	(A)		(B)	
1	Ice	a	takes the shape of container, can flow, and particles are not so near.	1 - b
2	Water	b	has fixed shape, and particles are very near each other.	2 - a
3	Water vapor	c	does not have a fixed shape, takes up all the space of the container and the particles are far from each other.	3 - c

13

	(A)		(B)	
1	1	a	solid state	1-b
2	2	b	liquid state	2-c
3	3	c	gas state	3-a



Question 08 Complete the following using words between brackets

1

(energy -pollution – sea birds – coral bleaching)

1. When water temperatures rise Coral bleaching happens
2. Throwing plastic wastes into a river causes water pollution
3. When predator feed on prey , predator get energy from prey
4. Sea birds dive deep down into the sea to feed on small fish

2

(Smoke – cold – pollution – die – ash)

1. Microorganisms live in cold water .
2. If the grass removed from ecosystem, primary consumers that feed on plants will die .
3. pollution is the harm that happen to air , soil and water due to human bad activities .
4. smoke and ash produced from burning forest cause pollution which harm animals .

3

(sun light– flood – small fish -producer – tertiary consumer)

1. Heavy rain in the desert lead to Flood which harm ecosystem
2. Small fish feed on microorganisms floating on the surface of the sea.
3. Microorganisms are considered as a producers living organisms .
4. Microplastic form from broken down of plastic by UV rays of Sun light
5. the secondary consumer is considered as prey for tertiary consumer .





(Measuring tape – solid – mass – liquid)

1. In solid state the particles are packed tightly with the others
2. liquid is state of matter that can be poured and take the shape of container .
3. Matter is anything that has mass and occupies space.
4. You can use measuring tape to measure the length of a table .



(globe – gas – force – solar system – volcano model)

1. When you blow a balloon, gas particles exert a force that inflates the balloon.
2. The volume and shape change in gas state .
3. Solar system model shows us all the planets, while globe model shows us Earth only.
4. Volcano model ooze liquid to model what happens during a real eruption.



(Solid – gas – electron microscope – earth)

1. The particles inside a gas matter move very freely.
2. A globe is a model of earth .
3. Solid matter has definite shape and volume .
4. Scientists can use special microscopes called electron microscope to see individual particles.

Question 10 **Answer the following questions**

1. **(Seabirds -microorganisms – small fish)**

A - Rearrange to form a correct food chain.
microorganisms → small fish → seabirds
B - Which of these organisms considered as a producer
microorganisms

② **Rearrange these organisms to make a correct food chain:**

(a) Snake – Grass – Hawk – Rabbit

Grass →rabbit→ snake →hawk

(b) Parrotfish – Algae – Shark – Coral

Algae → coral → parrotfish→ shark

(c) sea star – algae – shark - clam

Algae→ Clam → sea star→ shark

③ **Cross out the odd word:**

(a)- Oil – Milk – book – Tea book

(b) - Air – Water vapor – Ice – Carbon dioxide ice

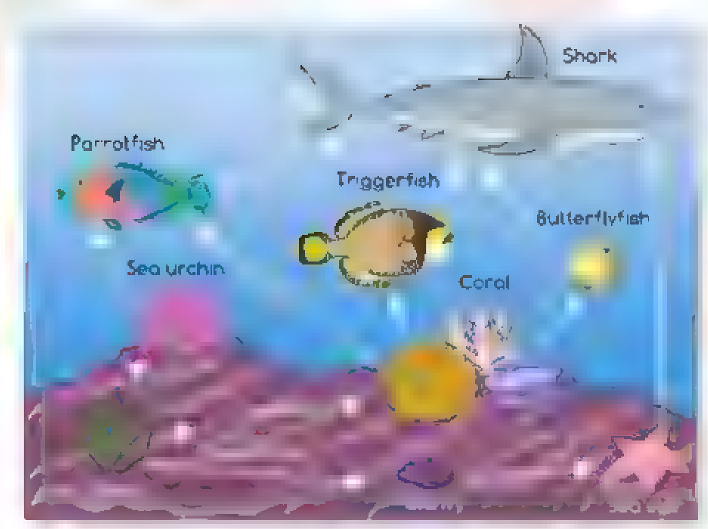
(c) - Water – Air – Light – Wood Light

④ **Classify the following materials in the following table into solids, liquids and gases:**

(Desk – oil– juice –steam – salt – pencil – air -Book - Smoke – Milk – Gold – Human – Rock – Oxygen)

	solid	liquid	gas
Examples	desk, pencil, salt, book, human, rock	oil – juice - milk	steam, air, smoke, oxygen

⑤ **Study the following figure then answer the questions :**



ⓐ This figure represents marine ecosystem .

ⓑ algae is considered as a producer .

ⓒ energy transfer when shark feed on parrot fish .

أنتهت الأسئلة مع أطيب الامنيات بالنجاح والتوفيق



November Revision

Mr. Ahmed Elbasha

(1) Write the scientific term:

1) They are consumers which feed on secondary consumers. (..........)

2) They are living organisms that include bacteria and fungi, which return energy back to the soil. (..........)

3) It is the number of organisms of one type of species live in an area. (..........)

4) They are organisms that are too small for people to see with only their eyes. (..........)

5) It is a condition in which coral reefs turn completely into white (..........)

6) They are rays coming from the Sun that break down plastic products into microplastics (..........)

7) Small pieces of plastics in the size of rice grains and they cause harms to marine organisms. (..........)

8) A process of returning a habitat back to its natural state before harm was done. (..........)

9) Anything that has a mass and a volume. (..........)

10) A property of matter by which we can distinguish between hot and cold objects (..........)

11) The state of water after its freezing . (..........)

12) The state of matter that has definite volume and shape. (..........)

13) The state of matter that is characterized by having a definite volume but it doesn't have a definite shape (..........)

14) Substances that take the shape and the volume of their containers (..........)

15)	The state of matter that has a lot of spaces between its particles	(................................)
16)	The tool used to measure the length of a wall.	(................................)
17)	A state of matter that has a fixed shape.	(................................)
18)	A device used to examine objects that are too small to be seen with the naked eye.	(................................)
19)	A state of matter that its particles vibrate around their place.	(................................)
20)	A state of matter that its particles move faster than solids and have a definite volume.	(................................)
21)	The state of water after its heating for high temperatures	(................................)
22)	A model of the whole world that is made in the shape of a large ball.	(................................)
23)	A copy that is similar to a real thing which we cannot observe with our eyes.	(................................)

✸(2) Complete the following:

1. If producers increase in an ecosystem, the number of primary consumers will ....
2. Heavy rain causes .... which destroys desert ecosystems.
3. Predators of living organisms may be . . . . for other living organisms.
4. Secondary consumers feed on .... consumers.
5. All energy in all living organisms return back to the environment by the help of ... ... organisms.
6. States of matter are ...., ... and ....
7. Iron and gold are examples of .... state of matter.
8. According to temperature, matter can be classified into ... . and .. . . objects.
9. The state of an ice cube is .... , while the state of the air we breathe is ....
10. States of matter are .... , ... and gases.
11. In the .... matter, the volume and shape don't change.
12. Water is a matter in ... . state, while water vapor is a matter in . . .. state.
13. Matter that takes the shape of its container, but its volume cannot be changed is ....
14. The . . .. of a pen can be measured by using a ruler.
15. Particles of .... matter are very close to each other.
16. Any matter is made up of millions of tiny .... that we cannot see with our eyes.
17. Particles of .... matter are packed closely together
18. Water evaporates when it is exposed to a .... temperature.
19. We can use ping pong balls to describe the movement of . . .. of the three states of matter.
20. To describe the particles of a matter in . . . . .. state by modeling balls, we should put the balls packed together.

(3) Choose the right answer :

1. The Sun provides the Earth with ....

a. light only. b. warm only c. light and warm. d. light and sound.

2. On extreme hot climate, the water of a lake ....

a. increases due to evaporation. b decreases due to evaporation.

c. changes into ice. d. has a lower temperature.

3. All the following factors pollute the water, except ....

a. sunlight. b. animals wastes. c. human wastes. d. plastic garbage.

4. All the following are affected by water pollution, except .. ..

a. the soil. b. the Sun. c. the animals. d. the plants.

5. Overfishing and throwing plastic garbage in the sea affect the survival of .... directly.

a. desert organisms b marine organisms c. rainforest organisms d rodents

6. When there is a gentle rain in a desert ecosystem, this ecosystem may be ... .

a. harmed. b. improved. c. destroyed. d collapsed.

7. All the following are top predators, except .. ..

a. hawks. b. tigers. c butterflyfish d lions.

8. If there is a tertiary consumer in a food chain, this means that there is . ..

a. a primary consumer only.

b. a secondary consumer only.

c. a primary and a secondary consumer.

d. neither primary nor secondary consumers.

9. In a food chain, the energy transfer ....

a. from a predator to a prey. b. from a prey to a predator.

c. from a predator to a producer. d. from a consumer to a producer.

10. If all grasses were removed completely from an ecosystem, rabbits in this ecosystem will ....

a. increase. b. decrease. c die. d. not be affected.

11. It is better for a predator in a food web, to have . .. .

a. only one type of decomposers b. more than one type of decomposers.

c. only one type of prey. d. more than one type of prey

12.Pollutants produced from a forest fire harm all the following, except . . ..

a. air. b. respiratory system. c grasses d. sunlight.

13.As a result of pollution in an ecosystem, the number of living organisms ....

a. decreases. b. increases. c. doesn't change. d. is doubled.

14.Any increase or decrease in the number of organisms of one type of species is known as ....

a. an ecosystem. b. adaptation.

c. a climate change. d. a population change.

15.Healthy marine environment is important for survival of ....

a. humans. b. lions. c. fish. d. deer.

16.When the marine habitats are destroyed, the number of living organisms in their food webs is ....

a. increased. b. decreased. c. not changed. d. doubled.

17.When water temperature increases, algae leave tissues of .. , so they become bleached.

a. seabirds b coral reefs c. clam d. sharks

18.Plastic waste materials cause all the following to the marine environment, except ... ..

a. breakdown in food webs. b. pollution of water.

c. increasing of population d decreasing of population.

19.Coral reefs are considered as resources of ....

a. food only. b. shelter only.

c. food and shelter d. food and pollution

20.Which of the following human activities don't harm a marine ecosystem ? . ...

a. Throwing plastic products in water.

b. Leakage of oil into water.

c. Overfishing and damaging of coral reefs

d. Recycling of plastic products.

21.Habitat restoration projects allow scientists to .... that occur to an ecosystem.

a. increase harms b. decrease harms

c. keep harms d. increase damages

22.The area in which the scientists take care of small pieces of coral until they grow up is known as ....

a. food chain. b. food web. c grassland. d. nursery.

23."Zero plastics" project that is applied in Egyptian coastal communities, means that the using of plastic products decreases by ....

a. 0% b. 10% c. 90% d. 100%

24.Matter be can be found in ....states.

a. 2 b. 3 c. 6 d. 7

25.Water can be found in a solid state in the form of .. ..

a. ice. b steam. c sea water. d. boiling water.

26.An example of a gas is ....

a. chocolate. b. rock. c. pencil. d. oxygen.

27.The amount of space that a matter takes up is called ....

a. volume. b mass. c. weight. d. area.

28.All of these substances are liquids, except ....

a. oil. b. milk. c. stone. d. vinegar.

29.Liquids have definite .... , but their ....are not definite.

a. volume-shape b. color-volume

c. shape – volume d. color-shape

30.Both .... and .... are solids as they have definite shape and volume.

a. wood-oxygen b. milk-iron

c. wood-iron d. milk-oxygen

31.Both ....and .... take the shape of their container.

a. air-plastic b. water-air

c. wood-air d. water-plastic

32.Gases have .... shape and .... volume.

a. definite-definite b. no definite-no definite

c. definite-no definite d. no definite-definite

33.Particles of .... are very close to each other.

a. gold b steam c milk d. oxygen

34.To measure the length of a table, we can use a . . ..

a. thermometer. b balance scale.

c. cylinder. d. measuring tape .

35.The shape of .... is fixed as it is a .... matter.

a. gold- liquid b. water- liquid

c. air-gas d. gold-solid

36.Oil takes the ... . of its container.

a. volume b. shape c. color d mass

37.Particles of .... vibrate around their place.

a. glass b. air c. oxygen d. water

38.By changing the . ... of a matter, its state may change.

a. mass b. volume c. color d temperature

39.If water is exposed to high temperature, its particles will move .. . . and the water may change into ....

a. faster-ice. b faster-water vapor.

c. slower-ice. d. slower-water vapor.

40.We can use a model to study very large things such as . . . .

a. solar system. b. germs. c microbes. d. viruses

41.By blowing up a balloon, ...

a. its volume decreases. b. its volume increases.

c. its color changes. d. its mass doesn't change.

42.To examine the structure of tiny particles of a matter, we can use ....

a. microscopes. b. balances. c. thermometers. d rulers.

43.The model of the Earth shows how much of its surface is covered with ....

a. gasoline. b. water. c milk d animals

44.We can see all planets of the .... system including the Earth by using a model.

a. solar b. digestive c. respiratory d. muscular

(4) Put (√) or (X)

1. If producers removed from an ecosystem, consumers will need to move away. (   )
2. Overfishing is one of the climate changes that affects the marine ecosystem. (   )
3. It is better to recycle the waste materials than throwing them in rivers and seas. (   )
4. Food webs don't change if their surrounding environments get changed. (   )
5. If there is a heavy rain in a desert ecosystem, it will be harmed. (   )
6. Top predators are decomposers that present at the top of food chains. (   )
7. Ecosystem can be effected by climate changes, pollution and human activities. (   )
8. Most of living organisms are prey for some animals and also predators for others at the same time. (   )
9. The Sun produces energy that decomposers use to make their food. (   )
10. The soil fertility depends on decomposers. (   )
11. Any food chain can be formed of producers only (   )
12. A desert food chain doesn't contain any type of fish or sharks. (   )
13. If the climate change is unsuitable, the population of a species decreases (   )
14. In an ecosystem, all species depend on other species for survival. (   )
15. Seabirds eat small fish that swim near the water surface. (   )
16. Healthy habitats provide living organisms with clean air, healthy food and water. (   )
17. Healthy coral reefs have no benefit to fish but they are important for tourism. (   )
18. Living organisms in seas and oceans cannot differentiate between real food and plastic waste materials. (   )
19. UV rays coming from the Sun, break down plastic wastes into microplastics. (   )
20. The polluted water has a positive effect on coral reefs. (   )
21. If coral reefs are destroyed, many marine food chains will be destroyed. (   )
22. Coral reefs are considered as a suitable habitat for sharks. (   )
23. People near the coastal areas must replace plastic bags with cloth one (   )
24. Ice is considered the solid state of matter. (   )
25. Matter never changes from one form to another. (   )

26. Volume is the space that is taken up by a matter	( )
27. All objects can be seen with the naked eye.	( )
28. Liquids don't take the shape of the container that they are placed in.	( )
29. Both gold and milk have definite shape.	( )
30. Gases keep their shape and volume whatever the container changes	( )
31. On transferring water from one pot to another, its volume will change.	( )
32. Liquid particles move freely more than solid particles	( )
33. Gases don't have a definite shape or volume.	( )
34. The speed of water vapor particles is slower than that of water particles.	( )
35. Germs are very large organisms that can be seen with the naked eye	( )
36. Air particles are visible as they are very large particles.	( )
37. Solar system contains only one planet which is the Earth.	( )
38. A model of an airplane shows us how it flies up into the air.	( )

(5) Choose from column (B) what suits it in column (A) :

1

(A)	(B)
1. There is a heavy rain in a desert.	**a.** this ecosystem may be improved due to melting of snow, where plant resources and animals shelters appear again.
2. There is a gentle rain in a rainforest.	**b.** this ecosystem may be harmed due to the decrease of the amount of rain, where plant resources and animals shelters may be affected.
	c. this ecosystem may be destroyed due to flooding, where plant resources and animals shelters removed away

1- 2-

2

(A)	(B)
1. Water	**a.** is not a matter.
2. Sand	**b.** is a liquid matter.
3. Air	**c.** is a gas matter.
	d. is a solid matter.

1- 2- 3-

3

(A)	(B)
1. Milk	**a.** its particles are packed tightly.
2. Air	**b.** its particles have medium energy.
3. Gold	**c.** its particles move very freely.
	d. its particles don't move at all.

1- 2- 3- 4-

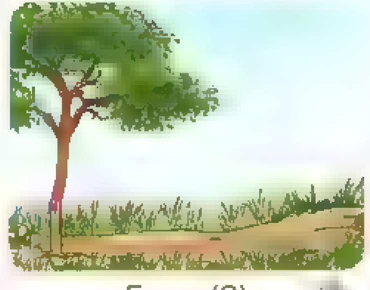
(6) TRY TO ANSWER:

1

Study the following figures, then put (√) or (X) :


Figure (A)


Figure (B)


Figure (C)

1. All living organisms in figures (A) and (B) can make their own food by photosynthesis process. ( )
2. Some marine organisms are present in figure (B). ( )
3. Top predators are found only in figure (A). ( )
4. All animals in figure (A) can find a prey in figure (B), except shark. ( )
5. To form a food chain, you have to rearrange the previous figures as follows :
   Figure (C) then → Figure (B) then → Figure (A). ( )

2

Complete the following sentences using these words:

(Microorganisms - smoke - increase - forests)

1. Fire of .... cause pollution that affects the survival of living organisms.
2. Forest fire produces .... that causes difficulty breathing for animals.
3. If the climate change is suitable, the population of a species will ....
4. Small fish feed on .... that float on the surface of the sea.

3

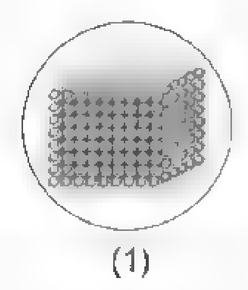
Complete the following sentences using these words :

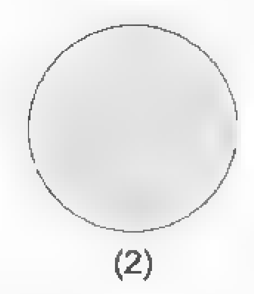
(Extinction - overfishing - toxic - predator)

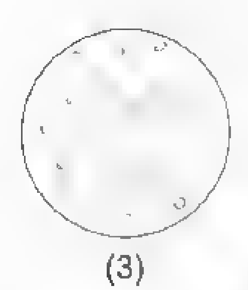
1. The human activity that directly decreases the marine population is ....
2. Habitat loss is not only decrease marine population but also it is one of the main causes of ....
3. When a sea turtle eats a jellyfish , this means that the sea turtle is a .... living organism.
4. Plastic waste materials are very harmful to marine organisms, because they are .... and sharp.

4

Study the following figures that represent particles of three states of matter, then put (√) or (X) :


(1)

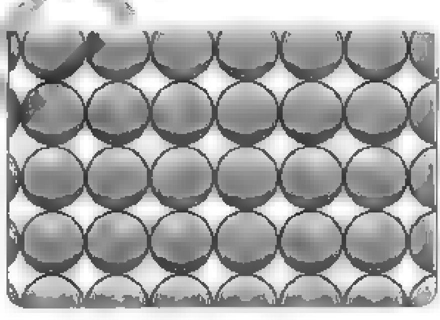

(2)


(3)

1. Figure (1) represents solid matter. ( )
2. Figure (2) represents liquid matter. ( )
3. By increasing the spaces between the particles of figure (2), this matter may change into solid state. ( )
4. Particles of figure (1) have more energy than particles of figure (3). ( )

5

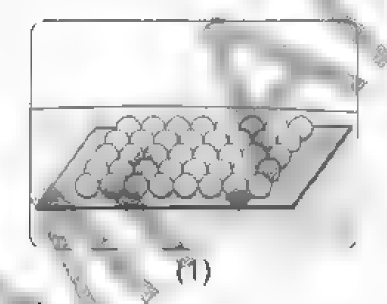
Look at the opposite model that shows the particles of a substance, then complete the following sentences :

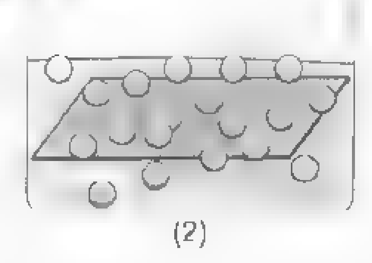


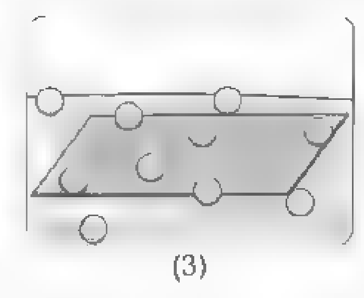
1. This model represent a substance in ... state.
2. If we want to make changes in this model to show this substance in a liquid state, we should .. the distances between balls

6

The following figures show three models of particles of some matter related to our planet Earth. Observe the figures carefully, then complete the following sentences:


(1)


(2)


(3)

1. Beads of figure could represent the particles of a rock on the Earth's surface.
2. Beads of figure . . .. . could represent the particles of river water on the Earth.
3. Beads of figure . could represent the particles of air that surrounds the Earth.
4. By heating the particles of figure (2), they will be similar to that of figure

Model Answer

(1) Write the scientific term:

1. Tertiary consumer
2. Decomposer
3. Population
4. Microorganism
5. Coral bleaching
6. Ultraviolet rays
7. Microplastic
8. Habitat restoration
9. Matter
10. Temperature
11. Solid
12. Solid
13. Liquid
14. Gas
15. Gas
16. Measuring tape
17. Solid
18. Microscope
19. Solid
20. Liquid
21. Gas
22. Globe
23. Model

(2) Complete the following:

1. Increase
2. Floods
3. Prey
4. Primary
5. Decomposer
6. Solid , liquid and gas
7. Solid
8. Cold - hot
9. Solid - gas
10. Solid , liquid
11. Solid
12. Liquid gas
13. Liquid
14. Length
15. Solid
16. Particles
17. Solid
18. High
19. Particles
20. Solid

(3) Choose the right answer :

1. C
2. B
3. A
4. B
5. B
6. B
7. C
8. C
9. B
10. C
11. D
12. D
13. A
14. D
15. C
16. B
17. B
18. C
19. C
20. D
21. B
22. D
23. A
24. B
25. A
26. D
27. A
28. C
29. A
30. C
31. B
32. B
33. A
34. D
35. D
36. B
37. A
38. D
39. B
40. A
41. B
42. A
43. B
44. A

(4) Put (√) or (X)

1. (√)
2. (X)
3. (X)
4. (X)
5. (√)
6. (X)
7. (√)
8. (√)
9. (X)
10. (√)
11. (X)
12. (√)
13. (√)
14. (√)
15. (√)
16. (√)
17. (X)
18. (√)
19. (√)
20. (X)
21. (√)
22. (X)
23. (√)
24. (√)
25. (X)
26. (√)
27. (X)
28. (X)
29. (X)
30. (X)
31. (X)
32. (√)
33. (√)
34. (X)
35. (X)
36. (X)
37. (X)
38. (√)

(5) Choose from column (B) what suits it in column (A) :

1

1 . c 2. b

2

1 . b 2. d 3. c

3

1 . b 2. c 3. A

(6) TRY TO ANSWER:

1

1. (X)
2. (X)
3. (√)
4. (√)
5. (√)

2

1. Forests
2. Smoke
3. Increase
4. Microorganism

3

1. Overfishing
2. Extinction
3. Predator
4. Toxic

4

1. (√)
2. (√)
3. (X)
4. (X)

5

1. Solid
2. Increase

6

1. (1)
2. (2)
3. (3)
4. ([illegible])

November revision G.5

2022-2023

Q.1: choose the correct word :

1. Decomposers are found at the .... of the food chain. (beginning - end)
2. .... are decomposing organisms. (Plants-Fungi)
3. Julius produce waste that is rich in .... (nutrients - glucose)
4. Producers obtain energy directly from .... (the sun - air)
5. are organisms that do not feed on other organisms. (Consumers - Producers)
6. …is transmitted from prey to predator in the food chain.(Only energy - Food and energy)
7. Snakes are considered prey for .... (rat - hawks)
8. .... is/are an example of scavenger organisms. (Eagles - Bacteria)
9. Flies in the house are considered .... creatures. (decomposer - scavengers)
10. When bacteria disappear from a stable ecosystem, it will be .... (stable- disturbed)
11. Plant seeds that are spread by wind are .... seeds. (sticky - light)
12. When the producer organisms disappear from an environment, the consuming organisms will .... (migrate to other places - stay in its place)
13. When there are large numbers of one species of living organism, the food resources .... after a period. (increase - disappear)
14. When there are large numbers of one species of living organism in ecosystem, it .... (get stronger - may die of hunger)
15. If there is gentle rain in the desert,the desert ecosystem may .... (improve - be damaged)
16. Producers and consumers die in the desert due to .... (the occurrence of drought - the increase in the number of predators)
17. Seabirds dive into the depths of the sea to ..... (build their nests - search for small fish)
18. Microorganisms are found at the .... of marine food chain. (beginning - end)
19. Microorganisms move to another environment when the water becomes ... (cold - warm)

20. **Small fish move to a new habitat upon the death of ………… (microorganisms - seabirds**

21. **Plastic products are broken into small pieces due to ultraviolet rays emitted from …………… .** **(sun - moon)**

22. **Plastic particles has ………… nutritional value of marine organisms such as whales and turtles.** **(large - zero (non))**

23. **Ice cubes that are placed in water are in a ………… state.** **(solid - liquid)**

24. **Solids and liquids both have a ………… .** **(definite volume - definite shape)**

25. **The air we breathe is an example of a …………… state.** **(solid - liquid - gaseous - frozen)**

26. **Particles are in a …………… state.** **(static - motion)**

27. **The …………… determines the state of matter.** **(number of particles - movement of particles)**

28. **Gases occupy ………… space than solids.** **(more - less)**

29. **Gas particles have a ………… volume.** **(large - small)**

30. **Water freezes into ………… .** **(ice - water vapor)**

31. **Matter consists of ………… .** **(waves - particles)**

32. **The walls and tables in your classroom are in a ………… state.** **(gaseous - solid)**

33. **………… has particles that are close to each other.** **(Oxygen - Iron)**

34. **A bicycle tire is a ………… .** **(solid - gas)**

35. **Solid particles are ………… each other.** **(close to - far from)**

36. **Solid particles allow matter to ………… .** **(keep its shape - take the shape of its container)**

37. **Liquid particles allow matter to ………… .** **(keep its shape - take the shape of its container)**

38. **Particles in the liquid state ………… .** **(move very fast - are static)**

39. **Particles in the gaseous state ……… (move very fast - don't move from place to another)**

40. **Earth can be seen from a ………… .** **(sailing ship - space satellite)**

41. **…… is a process that preserves vegetables and keeps them fresh.** **(Evaporation - Freezing)**

Q.2 : Complete the following statements :

1. primary consumers feed on …………
2. Earthworms and Julius are Examples of ………………..
3. Julius feed on ……………………………………………………………………………
4. The snail is one of the ……………creatures, while the crab is one of the …………
5. The seeds of plants that are scattered by the wind are………… to move for long distances.
6. The disappearance of………… organisms affects all living things in the food web.
7. the ecosystem may………… ,If there is heavy rain in the desert,
8. If drought occurs, and all the grass in the desert dies, so the food web may ……
9. Energy is transferred from ………….to producers until reaches to ………….process
10. …………………. project is an example of the restoration of natural habitats that take place in the Arabian Gulf.
11. ……….is important for the needs of living organisms to survive.
12. …………… phenomenon causes damages coral reefs and causes their extinction.
13. Some matters can be hard, such as …….. and some matters are soft, such as …….
14. ………………………. and……………. are both characteristics of matter
15. …………. matter has definite shape.
16. ……… state can be compressed
17. Water vapor is an example of a……state, while snow is an example of a….state
18. Solid particles are linked together by a …………. attraction force.
19. Liquids and gases both have ……………..shapes

Q.3: Correct the underline words :

1. Decomposers are located at the center of the food chain.
2. Consumer organisms help in soil fertility.
3. snake is considered a prey when it feeds on the rat ,.
4. Bread mold fungi are producer organisms.
5. The lion is considered one of the producers.

6. **Decomposers are organisms that get their food from producer organisms.**
7. **The lion is one of the decomposing creatures.**
8. **The seeds of light and coarse plants stick to human clothes without being noticed**
9. **When one type of living organism increases too much, the food resource increases.**
10. **The marine environment on the island of Palau shall be protected by establishing well-designed nurseries in its waters.**
11. **Organisms in the desert food web are damaged when the numbers of predators are stable.**
12. **Energy is recycled back into the ecosystem by consuming organisms.**
13. **Seabirds build their nests on the water surface**
14. **Microorganisms in the marine environment are considered primary consumers.**
15. **Sea birds feed on sharks.**
16. **Bleaching of coral reefs occurs when the water temperature decrease.**
17. **Plastic materials analysis under the effect of the moon.**
18. **Corals get food in turbid waters.**
19. **Gas particles are close to each other.**
20. **Particles of solid matter move quickly.**
21. **Particles of liquid matter move freely.**
22. **The attraction force between solid particles is very weak**
23. **Particles of a solid state are very far apart.**
24. **Particles in a liquid state move much faster than particles in a gaseous state.**
25. **Particles in a gaseous state do not usually move from one place to another.**
26. **Gas particles move slowly.**
27. **Water vapour is an example of matter in a solid state.**
28. **The three states of water are solid, liquid, and dew**

Q.4: Put (√) or (X)

1. Decomposers organisms break food into smaller pieces. ( )
2. Waste can be reduced through recycling. ( )
3. Sweating organisms feed on dead organisms after cutting them into small pieces. ( )
4. The disappearance of producers does not affect consuming organisms.( )
5. The food web contains all the components that make up the food chain. .( )
6. When pollution occurs on land, it does not affect marine organisms. .( )
7. The quality of the marine environment on the island of Palau can be closely monitored by the management of land activeities. .( )
8. some organisms die, When any change occurs in the ecosystem.( )
9. The shark feeds on the butterfly fish, which feeds on coral. ( )
10. Energy remains in the system as it, despite its transfer between living organisms. ( )
11. When all rabbits die of hunger, the rest of the living organisms within the food web are affected. ( )
12. Air pollution with smoke may destroy the food web. ( )
13. Energy is transmitted from microorganisms to small fish and from there to sea birds. ( )
14. Human activity may affect the weather and non-living things in the ecosystem. ( )
15. a limited number of living organisms Lives inside and around the coral reefs.
16. Sometimes coral reefs are the shelter to many other coral reefs.( )
17. Plastic particles has a size of a grain of rice. ( )
18. Plastic particles may cause poisoning of marine organisms. ( )
19. The sea turtle eats a lot of plastic, thinking it is a jellyfish. ( )
20. When coral reefs are polluted, the entire ecosystem may destroyed.
21. rain fall one of the causes of loss of habitat ( )
22. Plastic is a suitable food for many marine organisms.( )
23. Studying the properties of matter is unimportant. ( )
24. Human bodies are considered matter. ( )
25. Matter can be multi-colored or colorless. ( )
26. Matter can be changed from one state to another. ( )
27. Two objects can occupy the same space at the same time. ( )

28. Liquids keep their shape unless acted upon by an external force. ( )
29. Matter occupies space. ( )
30. Pencils are made of micro particles. ( )
31. Gas particles are coherent. ( )
32. The spaces between liquid particles differ from the spaces between gaseous particles. ( )

Q5: Choose the correct answer from the brackets :

1 - The food web in the ecosystem is not affected when …………

(Change in the environment - disappearance of producers - increase in the number of a species of living organisms - adaptation of organisms to the environment)

2- The following reasons destroy the desert ecosystem except ……..

(Light rain - heavy rain - drought and death of all grass - increase number of predators)

3- Seabirds search for food…………………..

(At the top of the mountain cliffs - by diving in the depths of the sea - by floating on the surface of the sea - in warm water)

4- When water is very warm……………..

(Algae close to coral reefs – the coral turns completely white – the reef is dying – the reef expels algae from its tissues)

5- Coral bleaching affects…………………

(coral reef population - fish population - human population - all of the above)

6- All of the following are products of the removal of huge quantities of plants except …

(Erosion of river banks - arrival of floods - distribution of ecosystem - stability of ecosystem)

7- From the following food web, the amount of squirrels decreases at ……………

(Decreasing the number of chickens - increasing the number of rabbits - increasing the number of foxes -increase the amount of grass)

8 - During the food chain, …………………transfer between living organisms.

(blood - matter - energy - heat)

9- ……………… food chain begins with a producer organism.

(On land - in the desert environment - in the aquatic environment - all of the above)

10 - The arrows in the food chain indicate ……………………………

(matter transfer direction - Recycling direction - Energy transfer direction - Increasing the amount of energy)

11- Sea turtles are considered to be …(Producing - consuming - decomposing - extinct) organism.

12- Coral bleaching occurs at …………………………….

(high temperature - low temperature - constant temperature - freezing)

13- All of the following are solid except:

A) Salt B) Wood C) Iron D) Benzene

14- ………………….. is a liquid substance.

A) Salt B) Wood C) Iron D) Benzene

15-- ……………….. is the state of water when it freezes.

A) Solid B) Liquid C) Gas D)Vapor

16 - ……………….is/are an example of solid matter.

A) Clouds B) Books C) Small ponds D) Mineral water

17- …………………………..is an example of liquid matter.

A) Ice cream B) Orange juice

C) Carbonated water D) Molten ice

18- The energy of solid particles is……....... the energy of liquid particles.

A) greater than B) less than C) equal to

19 - ………………….. particles move freely

A) Solid B) Liquid C) Gaseous D) Frozen

20 - ....matter has particles with large spaces and high kinetic energy

A) Solid B) Liquid C) Gaseous D) Frozen

21 – Solid particles......

A)are coherent B) are free to move c) are incoherent d) take the shape of their container

22 - Particles in the liquid state ....

A)are coherent B) are free C) are very close to each other D) take the shape of container

23 - Particles in the gaseous state ....

A) are coherent B) are free C) are incoherent D) keep their shape from changing

24 - ...... particles are in an order and pattern that keeps their shape from changing

A) Gaseous B) Liquid C) Solid D) Vapour

25 - .... has particles that are interconnected and close to each other

A- Water B- Milk c) Water vapour D) Wood

Q6: Write the scientific term :

1 - The main food source for many seabirds. ( )

2- Decrease or increase the number of a species of living organism in environment. ( )

3- A phenomenon that occurs to coral reefs when the water temperature rises. ( )

4 - An area in the ocean where small of coral reefs are cared for. ( )

5- Pollution occurs due to the throwing of plastic waste in sea water. ( )

6 - Anything that has mass and occupies space. ( )

7- A substance with particles that are interconnected and close to each other. ( )

8- A substance with particles that maintain their cohesion. ( )

9 - A substance with particles that move at very high speeds. ( )

Q7: Give reasons for each of the following:

1 - The importance of natural habitats for living organisms.

....

2 - Human interference in the environment is one of the reasons for changing the natural habitat.

....

3- Ice is a solid state

....

4- Perfume is a gaseous state

....

5- you cant break a piece of iron with your hand

....

Q8: What happens when:

1 - High amounts of plastic materials in the marine environment.

....

2 - The disappearance of coral reefs.

....

3- Removing huge amounts of plants.

....

4- you open a bottle of perfume

....

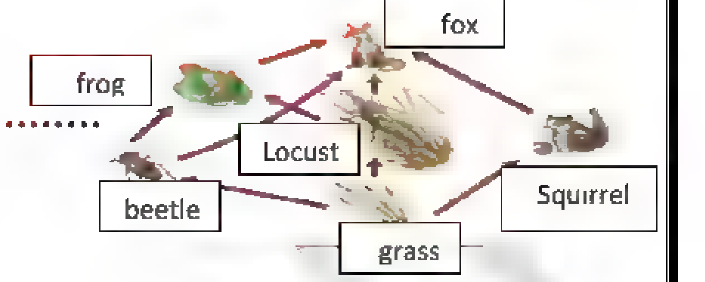
5-you put amount of water in a new container differ in shape than the first one

....

6-you put a cube of wood in a new container differ in shape than the first one

....

Q9: From the opposite food web, complete:



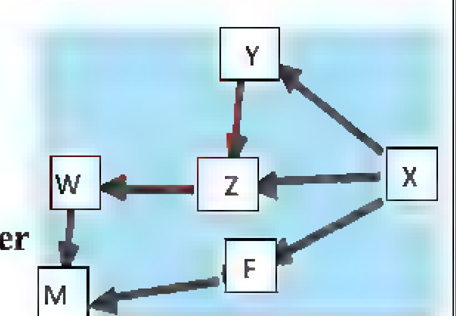
1- The number of locusts decreases when ………………

2- When a squirrel dies, a……… is looking for an alternative source of food

3- the death of …………… causes the death of rest of the organisms in the food chain

4- ……………………… is considered a producer

Q10: From the following food web, complete:

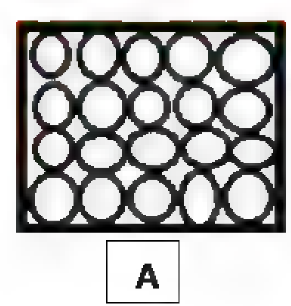


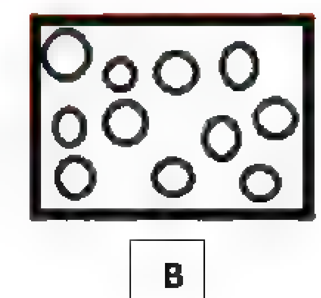
1- The only producer organism is ………………………

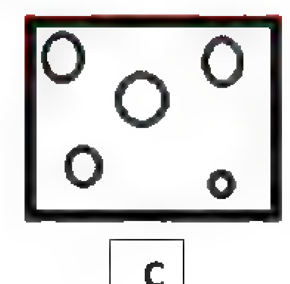
2 - The object (Z) related to the object (X) is considered a……….. consumer ,

and related to the object (Y) is considered a…………. consumer

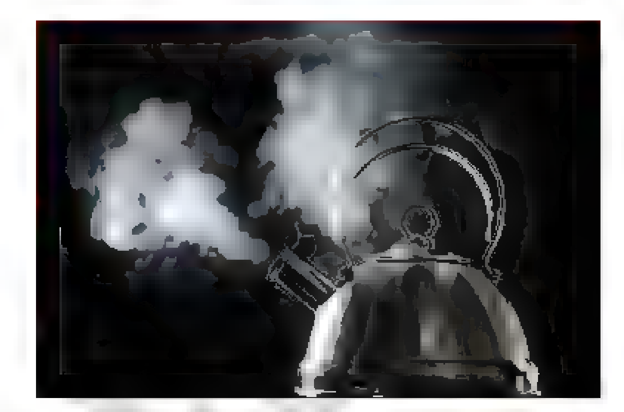
Q11: Which of the following pictures show the shape of particles in a gaseous substance?


A


B


C

Q 12: Look at the rising water vapor in the opposite figure, then complete:



1 – State:………

3 – shape :………………..

4 – volume:......................

6 - The distance between the particles:……………

7 - Particle cohesion:………

8 - Particle movement:…………

9- Mention the state of container?

Answers

Q.1

1- End	8-Eagles	15-Improve	22-zero (non)	29-large	36-keep its shape
2- Fungi	9-Scavengers	16-The occurrence of drought	23-Solid	30 Ice	37-take the shape of its container
3- Nutrients	10-Disturbed	17-Search for small fish	24-difinite volume	31-Particles	38-move very fast
4- Sun	11-Light	18-Beginning	25-Gaseous	32-Solid	39-moving very fast
5- Producer	12-migrate to other places	19-warm	26-motion	33-Oxygen	40-Space satellite
6-food and Energy	13- disappear	20-Microorganisms	27-movement of Particle	34-Solid	41-Freezing
7- hawks	14- may die of hunger	21-Sun	28-more	35-close to	

Q.2Complete

1. Plants
2. decomposers
3. Remains of dead plants
4. scavengers - decomposers
5. Light
6. Producers
7. destroyed
8. destroyed
9. Producers , decomposition
10. restoration
11. Natural habitats
12. Coral reef bleaching
13. Stone, feathers

14. Occupies space - has mass
15. Solid
16. Gaseous
17. gaseous, solid
18. attraction
19. indefinite

Q.3 Correct :

1. End
2. decomposers
3. Predator
4. decomposer
5. Consumer
6. Primary consumers
7. Fungi
8. Sticky
9. decrease
10. Marine reserves
11. Increase
12. decomposer
13. The top of the mountain cliffs
14. Producers
15. Small fish
16. increase
17. Sunrays
18. clear
19. Solid
20. Slowly
21. gas
22. Interconnected
23. Very close to each other
24. Solid
25. Solid
26. Completely freely (very quickly)
27. gas
28. gas

Q4

1-×	17-√
2-√	18-√
3-√	19-√
4-×	20-√
5-√	21-√
-6 ×	22-×
7-√	23-×
8-√	24-√
9-√	25-√
10-√	26-√
11-√	27-×
12-√	28-×
13-√	29-√
14-√	30-√
15-√	31-×
16-√	32–√

Q.5 Choose :

1 – Adaptation of objects to the environment

2 – Light rain

3 – Diving in the depth of sea

4 – the coral turns completely white

5 – All of the above

6 – Stability of the ecosystem

7 – Increasing the number of foxes

8 – Energy

9 – All of the above

10 – Energy Transfer Direction

11 . Consuming

12 – High temperature

13 – Benzene

14 – Gasoline

15 –Solid

16 – Books

17 – Ice cream

18 – Less than

19 – Gaseous

20 – Gaseous

21 – are coherent

22 – take the shape of their container

23 – are incoherent

24 – Solid

25 – Wood

Q6:

1 – Small fish

2 . population

3 – bleaching coral reefs

4 – nursery

5 – Plastic pollution

6 – Matter

7 – Solid

8 – Solid

9 – Gaseous substance

Q7 :

1 – Because they **provide living organisms with everything they need, to survive.**

2 – Because he built roads and **buildings**, **threw wastes into water, and overfished** fish**.**

3- because the particles of ice are very close to each other and has a strong attraction force

4- because the particles of perfume are very far from each other and has a very weak attraction force

5- because it has a strong attraction force between its particles

Q8:

1 – Damage to the marine environment and all living organisms living in it and cuases destruction of marine food web

2 – Negatively affect coral population **, fish population and human population communities that depend on them for food.**

3 – the ecosystem will destroy

4- the smell of perfume will spread all over the room as it is a gaseous state

5- the water take the shape of new container

6-the shape and volume of the cube still constant

Q9:

1 – frogs increase

2 – Fox

3 – Herbs

4 – Herbs

(10)

1 – X

2 – primary consumer - secondary consumer

(11) Fig. C

(12)

1 – Gaseous

3 – indefinite (variable)

4 - indefinite (variable)

6 – Very large 7 – Very weak 8 – Random very fast 9- Solid

Primary 5

Question 1

Choose the correct answer:

1. To make a food web, you have to classify animals in an ecosystem according to their ……………. they get.

   a. water b. light c. gases d. food

2. The place in which we can take care of small pieces of coral until they grow up is located in …………

   a. seas. b. air. c. deserts. d. forests.

3. Zero plastics" project that is applied in Egyptian coastal communities, means that the using of plastic products decreases by ……..

   a. 0% b. 10% c. 90% d. 100%

4. To reduce pollution, we have to replace white plastic forks with ………

   a. wooden forks b. black plastic forks.

   c. yellow plastic forks d. green plastic forks.

5. The area in which the scientists take care of small pieces of coral until they grow up is known as ……………..

   a. food chain. b. food web. c. grassland. d. nursery.

6. If there is no primary consumers in an ecosystem, the producers will………….

   a. increase. b. decrease. c. die. d. not be affected.

7. Rabbits eat all the following types of food, except………

a. grasses. b. carrots c. seeds. d. insects.

8. Food web shows interactions between……..

a. few nonliving things b. many nonliving things.

c. many living organisms. d. few living organisms.

9. The nutrients that resulted from decomposition and returned to the ecosystem can be used directly by ………..

a. consumers. b. producers. c. predators. d. decomposers.

10. In the decomposition process, the role of comes before the role of…….

a. scavengers — decomposers. b. decomposers — scavengers.

c. consumers — producers d. predators — producers.

11. A snake is a predator for mice, while snake is considered as a prey of……………..

a. rabbit. b. frog. c. eagle. d. deer.

12. An example of a gas is …………..

a. chocolate. b. oxygen. c. pencil. d. boiling water.

13. Particles of ………….. matter are very close to each other and they have less energy.

a. solids b. liquids c. gases d. a and b

14. Liquids have definite …… , but their …….are not definite.

a. volume-shape b. color-volume

c. shape-volume d. color-shape

15. Both ....and .... have definite shape and volume.

a. wood-oxygen

b. milk-iron

c. wood-iron

d. milk-oxygen

16. All the following are affected by water pollution, <u>except</u> ...

a. the soil. b. the Sun. c. the animals d. human

17. Both ....and .... have the same state of matter.

a. wood-water b. plastic-oil c. wood-milk d. wood-plastic

18. To measure the length of a table, we can use a.....

a. thermometer. b. cylinder. c. balance scale. d. measuring tape.

19. The Sun provides the Earth with ....

a. light only. b. warm only. c. light and warm d. light and sound.

20. Gases have..............shape and...........volume.

a. definite-definite

b. no definite-no definite

c. definite-no definite

d. no definite-definite

21. Seabirds build their nests ....

a. on the water surface.

b. on the top of mountain cliffs.

c. deep down into the sea.

d. deep down into the river.

22. Fire in forest produces ......

a. smoke only.

b. ash only.

c. smoke and ash.

d oxygen and ash.

23. All the following are top predators, <u>except</u>...........

a. hawks. b. tigers. c. butterflyfish. d. lions.

24. Coral reefs are negatively affected by ....

a. rising water temperature only.
b. ingesting microplastics only.
c. Both of rising temperature and ingesting microplastics.
d. neither rising of temperature nor ingesting microplastics.

25. The liquid matter is characterized by all the following, except ....

a. its particles move faster than solid particles.
b. its particles move slower than gas particles.
c. its particles can't spread to fill up any container they put in.
d. its particles are held together more closely than solid particles

26. Decomposition process occurs to ....

a. dead animals and living plants.
b. living animals and dead plants.
c. dead animals and plants
d. living animals and plants.

27. When there is a gentle rain in a desert ecosystem, this ecosystem may be..................

a. harmed.
b. improved.
c. destroyed.
d. collapsed.

28. If the climate change is suitable, the population of a species ....

a. will die.
b. will not be affected.
c. will increase.
d. will decrease.

29. As a result of coral reefs bleaching, they will be ....

a. increased.
b. enlarged.
c. survived.
d. died

30. When coral reefs............ the seawater, they may ingest microplastics.

a. evaporate
b. filter
c. cool
d. warm

31. Coral reefs are considered as resources of ....

a. food only.
b. shelter only.
c. food and shelter.
d. food and pollution.

32. In a food chain, the energy transfers ....

a. from a consumer to a producer.
b. from a predator to a producer.
c. from a predator to a prey.
d. from a prey to a predator.

33. Plastic waste materials cause all the following to the marine environment, except...............

a. breakdown in food webs.
b. pollution of water.
c. increasing of population.
d. decreasing of population.

34. .... are living organisms that are negatively affected by pollution of marine ecosystem.

a. Whales and lions
b. Sharks and tigers
c. Elephants and deers
d. Algae and fish

35. Coral reefs are ....

a. living organisms
b. bacteria
c. ecosystem
d. fungi

36. The shape of ....is fixed as it is a .... matter.

a. gold-liquid
b. water- liquid
c. air-gas
d. gold-solid

37. Algae in coral reefs provide food for .... directly.

a. primary consumers
b. secondary consumers
c. producers
d. top predators

Question 2

Choose from (A) what suits it in (B):

1.

(A)	(B)
1. Coral reefs	**a.** they are marine top predators.
2. Triggerfish	**b.** they are producers in the marine ecosystem.
3. Algae	**c.** they are prey for sharks.
	d. they are food resources for parrotfish.

2.

(A)	(B)
1. Carbon dioxide	a) is not a matter.
2. Sand	b) is a liquid matter.
3. Gasoline	c) is a gas matter.
	d) is a solid matter.

3.

(A)	(B)
1. Milk	**a)** its particles are packed tightly.
2. Air	**b)** its particles have medium energy.
3. Wood	**c)** its particles move very freely.
	d) its particles don't move at all.

Question 3

Cross the odd word:

1. **Oil — Milk — Water — Wood.**
2. **Plastic — Vinegar — Iron — Aluminum.**
3. **Coal — Carbon Dioxide — Oxygen — Air**

Question 4

Put (√) or (X):

1. Coral reefs eat butterflyfish to get energy.
2. Ice is considered the solid state of matter.
3. Nutrients that present in living organisms bodies returned to the ecosystem after death.
4. Light and sound are forms of matter.
5. It is difficult to make a food web if we don't know the type of food that each consumer eats.
6. Liquid particles move freely more than solid particles.
7. Liquids don't take the shape of the container that they are placed in.
8. Gases keep their shape and volume whatever the container changes.

9. Some particles of matter can be examined by regular microscopes.
10. Zooplankton can make their own food by photosynthesis process.
11. Particles of all matter are in a continuous motion.
12. Recycling of waste materials reduces pollution and the size of landfills.
13. Top predators are decomposers that present at the top of food chains.
14. At the beginning of decomposition process, decomposers break dead organisms down into smaller pieces.
15. Matter never changes from one form to another
16. Coral reefs depend on butterflyfish for food and shelter.
17. It is better to recycle the waste materials than throwing them in rivers and seas
18. In an ecosystem that contains rabbits, mice, eagles and snakes only, if snakes disappear completely, so eagles will disappear completely.

19. Ecosystem can be affected by climate changes, pollution and human activities
20. Two equal amounts of sugar and salt cannot take up the same space at the same time.
21. Particles of water can move more freely than the particles of water vapor.
22. All objects can be seen with the naked eye
23. Volume is the space that is taken up by a matter.
24. If coral reefs are destroyed, many marine food chains will be destroyed.
25. It is better to keep natural resources healthy than applying restoration projects.
26. Removing plants negatively affects consumers in an ecosystem.
27. All forms of matter are colored.
28. Primary consumers and predators in seas and oceans are negatively affected by rising water temperature
29. Forest fire negatively affects the marine organisms.

30. Forest fire produces smoke only that covers the grasses
31. When the temperature of seawater decreases, coral reefs receive more algae
32. Coral reefs filter the seawater to get their needed food.
33. UV rays coming from the Sun, break down plastic wastes into microplastics.
34. Coral bleaching occurs as a result of throwing plastic in seawater
35. Both of bread mold and mushroom are two types of bacteria.

Question 5

Write the scientific term:

1. It is a process through which humans can make new products from waste materials.
2. They are organisms that break down the remains of dead plant
3. Flying living organisms that build their nests on the top of mountain cliffs and dive deeply into the sea to eat
4. They are consumers that exist at the top of food chain
5. They are organisms that feed on dead organisms bodies and break them down into smaller pieces.
6. It is the harms that happen to air, water and soil due to human activities.

7. It is an area in the sea, where scientists take care of small pieces of coral until they grow up.

8. Small pieces of plastics in the size of rice grains and they cause harms to marine organisms.

9. It transfers between animals in a food web, to help them do their activities and survive

10. A state of matter that has a fixed shape

11. It is the number of organisms of one type of living in an area

12. Anything that has a mass and a volume.

13. It is a condition in which coral reefs turn completely into white.

14. state of matter that its particles move faster than solids and have a definite volume.

15. The state of water after its freezing.

16. A device used to examine objects that are too small to be seen with the naked eye

17. It is a process of returning a habitat back to its natural state before harm was done

18. property of matter by which we can distinguish between hot and cold

19. the tool used to measure the length of a wall

20. The state of matter that has a lot of spaces between its particles.

Question 6

Complete the following sentences:

1) We cannot make a food web, if we don't know the types of............ that the animals eat.
2) Heavy rain causes..................which destroys desert ecosystems.
3) All matter are made up of tiny ....
4) The human activity that doesn't pollute water but decreases the number of marine organisms is known as.................
5) Iron and gold are examples of ....state of matter.
6) The state of an ice cube is .... , while the state of the air we breathe is ....
7) According to temperature, matter can be classified into ....and ....objects
8) The particles of .... matter have a lot of energy.
9) decomposition process done by two types of living organisms, which are.......... organisms and................ organisms.
10) The interconnected food chains are known as..............
11) Snails, earthworms and slugs are considered as .... , while vultures, crabs and cockroaches are considered as ......
12) It is better to ....waste materials than throwing them in an ecosystem.
13) An eagle can eat rabbits and mice, which are considered as ....

14) Particles of ……. matter can slide over each other so they take the……………of their containers.

15) All energy in all living organisms return back to the environment by the help of………….. organisms.

16) Particles of liquid matter can move more faster than………. matter and more slower than …………………………………… matter

17) Particles of………………… matter are packed closely together.

18) The length of a pen can be measured by using a …..

19) Water is a matter in ……………………………. state, while water vapor is a matter in ………………………………….. state.

Question 7

Study the following figure then complete the sentences below:

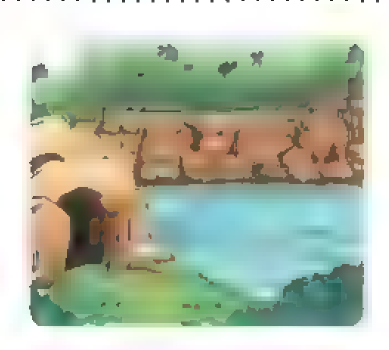
a. Grass Grasshopper Frog

Study the opposite figure, then choose the correct answer

If the number of snakes increases suddenly, ………….

a. the number of frogs increases and the number of hawks decreases.
b. the number of frogs decreases and the number of grasshopper increases.
c. the number of hawks decreases and the amount of grass increases.
d. the number of grasshopper increases and the number of hawks decreases.

b.



A



B

Study the following two figures, then put (✓) or (x)

1. Rabbits can grow and reproduce in healthy natural resources that present in figure (B). ( )

2. Figure (A) includes healthy resources of food, water and shelter for seabirds. ( )

3. Habitat restoration projects can be applied on figure (B) only, where figure (A) contains healthy natural resources. ( )

4. We can use figure (B) as a nursery for corals until they grow up. ( )

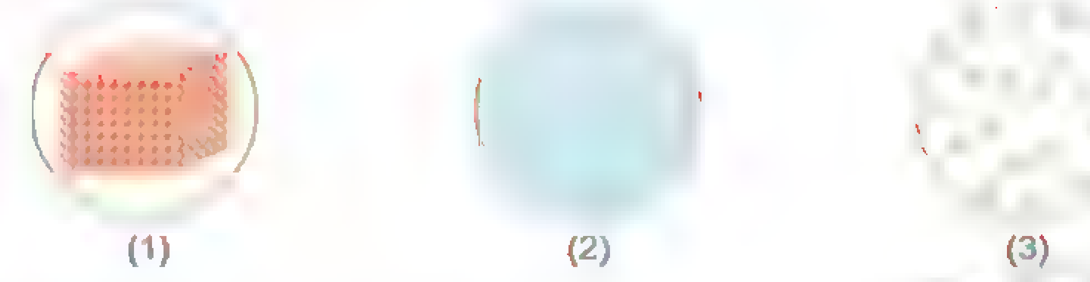
c. Study the opposite figure, then choose the correct answer



The figure show.........

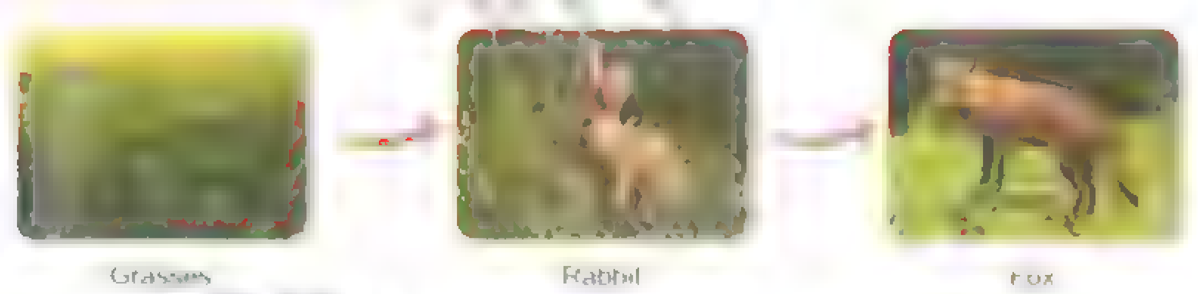
a) energy transfers from mushrooms to dead plant.
b) energy transfers from dead plant to mushrooms.
c) oxygen gas transfers from air to dead plant for breathing process.
d) carbon dioxide gas transfers from air to dead plant for photosynthesis process

d. The following figures represent particles of three states of matter, then put (✓) or (x)



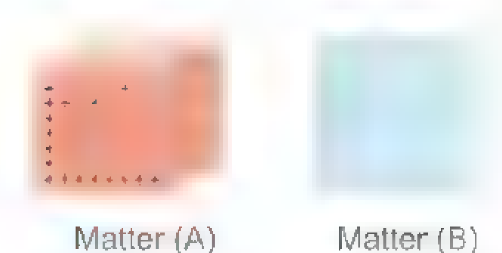
1. Figure (1) represents solid matter.
2. Figure (2) represents liquid matter.
3. By increasing the spaces between the particles of figure (2), this matter may change into solid state.
4. Particles of figure (1) have more energy than particles of figure (3).

e. Study the following food chain in an ecosystem, then complete the table below :



Situations	Results
1. The number of rabbits increases	the amount of .... decreases, while the number of...... increases
2. The amount of grasses ....and the number of foxes	the number of rabbits increases.
3. All ....disappear or their role change in this food chain.	all foxes are move away to another ecosystem to search for food.
4. The ecosystem is affected by severe drought conditions.	all .... die, because there is no water to make their own food.

f. the opposite figures that represent the three states of matter, complete the following sentences:



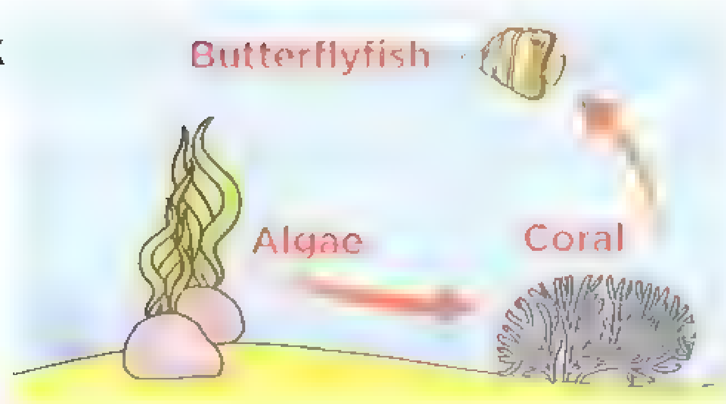
1. Matter in figure .... takes the shape of its container but its volume doesn't change.
2. Particles of figure .... move faster than that of figure .... and figure ....
3. Particles of figure .... are not held together.



g. What is happening on land affects what is happening in the marine environment" According to the previous fact, study the following figure then

Complete the sentences below

1. The living organism that can make photosynthesis process is ....
2. Energy can flow from marine environment to land, when the hawk eats ....
3. If many sharks are present in this ecosystem, ... will moved to another ecosystem to search for food.



Question 8

Give reasons for:

1. Both of rising water temperature and ingesting microplastics are harmful for coral reefs.
2. Coral reefs are important for human communities
3. Salt is a matter.
4. In case of forest fire, animals suffer from difficulty breathing.
5. Wood has definite shape and volume.
6. Rubber differs from iron. (according to their hardness).
7. Sugar is a solid matter.
8. Particles of gases can spread out quickly to fill up any container they put in.

Question 9

What happen if:

1. We try to examine the particles of any substance with our naked eyes.
2. Water changes into ice.
3. Water is heated in the kettle for few minutes. (according to the state of water after heating).
4. The climate change is unsuitable for a population of one type of species.
5. The seawater becomes warm.

Answers

Question 1

Choose:

1)	d	2)	a	3)	d	4)	a	5)	d
6)	a	7)	d	8)	c	9)	b	10)	a
11)	c	12)	b	13)	a	14)	a	15)	c
16)	b	17)	d	18)	d	19)	c	20)	b
21)	b	22)	c	23)	c	24)	c	25)	d
26)	c	27)	b	28)	c	29)	d	30)	b
31)	c	32)	d	33)	c	34)	d	35)	c
36)	d	37)	a						

Question 2

Choose from (A) what suits it in (B):

1. **1. d 2.c 3. b**
2. **1.c 2. d 3. b**
3. **1.b 2. c 3. a**

Question 3

Cross the odd word:

1. Wood 2. Vinegar 3. Coal

Question 4

Put (✓) or (X)

1. X
2. ✓
3. ✓
4. X
5. ✓
6. ✓
7. X
8. X
9. ✓
10. X
11. ✓
12. ✓
13. X
14. X
15. X
16. X
17. ✓
18. ✓
19. ✓
20. ✓
21. X
22. X
23. ✓
24. ✓
25. ✓
26. ✓
27. X
28. ✓
29. X
30. X
31. ✓
32. ✓
33. ✓
34. X
35. X

Question 5

Write the scientific term:

1. Recycle
2. Decomposers
3. Seabirds
4. Top predators
5. Scavengers
6. Pollution
7. Nursery
8. Microplastics
9. Energy
10. Solid state
11. Population
12. Matter
13. Coral bleaching
14. Liquid state
15. Solid state
16. Microscope
17. Habitat restoration
18. Temperature
19. Measuring tape
20. Gas state

Question 6

Complete the following sentences:

1. Food
2. Flooding
3. Particles
4. Overfishing
5. Solid
6. Solid / gas
7. Hot / cold
8. Gas
9. Scavengers /decomposers
10. Food web
11. Decomposers/scavengers
12. Recycle
13. Food chain
14. Liquid / shape
15. Decomposers
16. Solid /gas
17. Solids
18. Ruler
19. Liquid / gas

Question 7

Study the following figure then complete the sentences below:

a. b

b. 1. X 2. X 3.✓ 4. X

c. b

d. 1.✓ 2. ✓ 3. X 4. X

e. 1.grasses / foxes
2.increasess / decreases
3.rabbits
4.grasses

f. 1. B
2. C / A/ B
3. C

g. 1. Algae
2.butterflyfish
3. hawk

Question 7

Give reasons for:

1. Because rising of water temperature cause coral bleaching, and microplastics are toxic and sharp.
2. Because humans feed on fish that depend on algae in coral reefs for food.
3. Because it has mass and volume
4. Because fire forest produce smoke that causes difficulty in breathing of animals
5. Because it is a solid matter
6. Because rubber is a soft matter, while iron is a hard matter
7. Because it has definite shape and volume
8. Because they are not held together

Question 8

What happen if:

1. Particles cannot be seen
2. It will have a definite shape
3. It becomes gas (it changes from liquid state to gas state)
4. The population of this species will decrease.
5. The microorganisms will move away to a cooler water and also fish that feed on microorganisms.